

Data File : VL032994.D
Acq On : 14 Dec 2018 9:39
Operator : SY/AP
Sample : J6382-01
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
P00131-SG001-181212-01

Quant Time: Dec 14 10:16:04 2018
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL120718AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Dec 07 09:35:17 2018
QLast Update : Fri Dec 07 09:35:17 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	1007701	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	2315945	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	2410726	10.00	ppbv	0.00

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.58 95 1953851 10.97 ppbv 0.00
Spiked Amount 10.000 Range 65 - 135 Recovery = 109.70%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.08	85	77526	0.576	ppbv	97
3) Chlorodifluoromethane	2.99	51	135643	1.777	ppbv #	65
4) Chloromethane	3.17	50	33006	0.743	ppbv	99
7) Chloroethane	3.60	64	505	0.031	ppbv	99
9) Propene	3.05	41	42055	1.394	ppbv #	76
10) Heptane	8.25	43	8299	0.073	ppbv #	70
11) Trichlorofluoromethane	4.01	101	46586	0.368	ppbv	89
13) Ethanol	3.65	45	148984	14.339	ppbv	98
15) Acetone	3.90	43	1188824	13.745	ppbv	99
16) 1,3-Butadiene	3.35	39	48303	1.408	ppbv #	17
17) tert-Butyl alcohol	4.38	59	13650	0.620	ppbv #	59
19) Isopropyl Alcohol	4.04	45	18689	0.344	ppbv #	95
20) Methylene Chloride	4.41	84	97196	2.299	ppbv	95
23) Vinyl Acetate	5.14	43	79755	0.545	ppbv #	56
25) Ethyl Acetate	5.78	43	162353	0.795	ppbv #	89
26) Hexane	5.78	57	104861	1.112	ppbv #	51
27) Carbon Disulfide	4.63	76	4219	0.036	ppbv #	1
30) Cyclohexane	7.24	84	2606	0.033	ppbv #	1
34) 2-Butanone	5.34	43	87360	0.866	ppbv	98
35) Carbon Tetrachloride	7.13	117	6821	0.037	ppbv #	42
36) Benzene	7.01	78	25061	0.147	ppbv	96
39) 1,2-Dichloropropane	7.29	63	587189	9.089	ppbv #	21
41) Tetrahydrofuran	6.17	42	49844	0.794	ppbv	97
44) 2,2,4-Trimethylpentane	8.00	57	19310	0.067	ppbv #	42
53) Toluene	9.95	91	1158856	6.415	ppbv	100
58) Ethyl Benzene	12.87	91	45721	0.178	ppbv	99
59) m/p-Xylene	13.13	91	366511	1.572	ppbv #	100
60) o-Xylene	13.85	91	81449	0.346	ppbv	96
73) 1,3,5-Trimethylbenzene	16.16	105	8575	0.033	ppbv #	86
74) 1,2,4-Trimethylbenzene	16.93	105	53660	0.185	ppbv #	73

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

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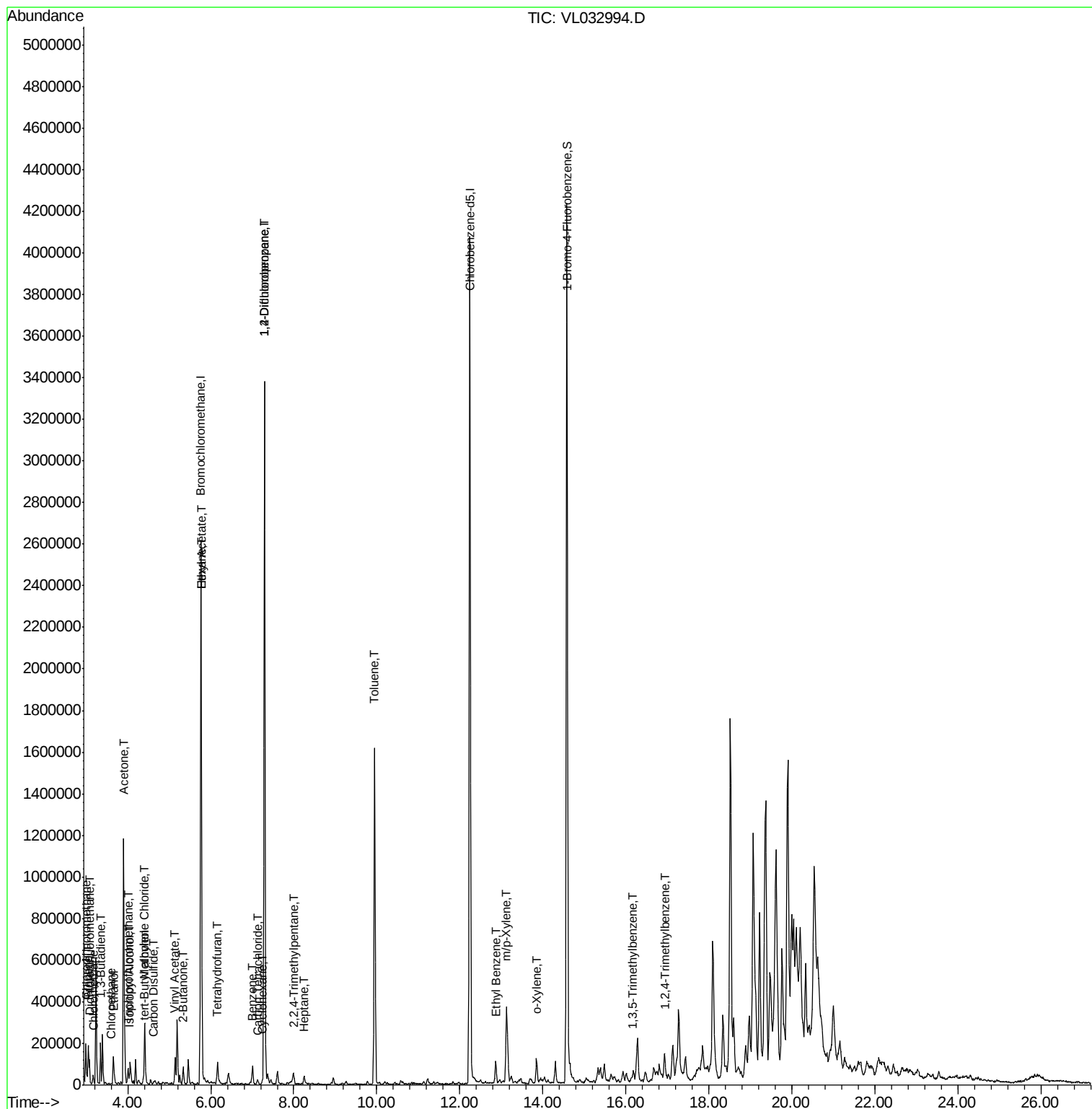
Quant Time: Dec 14 10:16:04 2018

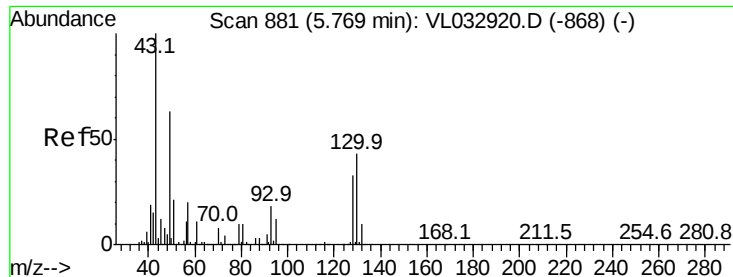
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL120718AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Dec 07 09:35:17 2018

QLast Update : Fri Dec 07 09:35:17 2018

Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 879

Delta R.T. -0.01 min

Lab File: VL032994.D

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Instrument :

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ClientSampleId :

P00131-SG001-181212-01

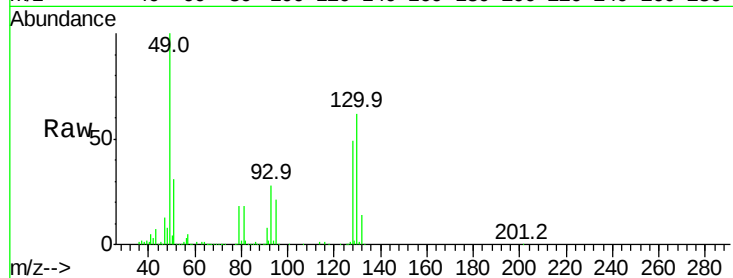
Tgt Ion: 49 Resp: 1007701

Ion Ratio Lower Upper

49 100

128 51.5 26.3 78.8

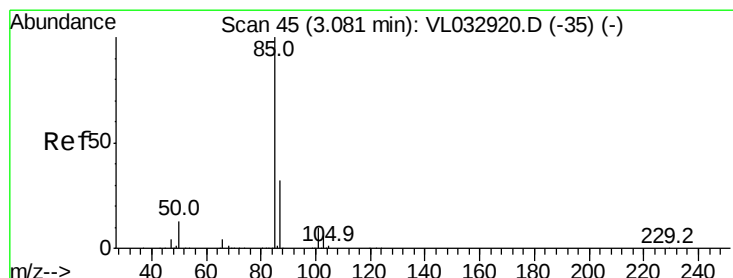
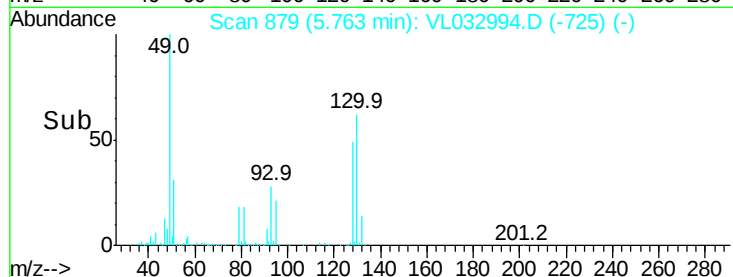
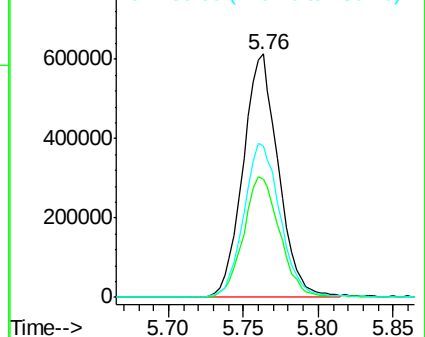
130 65.6 33.9 101.7



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: 0.576 ppbv

RT: 3.08 min Scan# 44

Delta R.T. -0.00 min

Lab File: VL032994.D

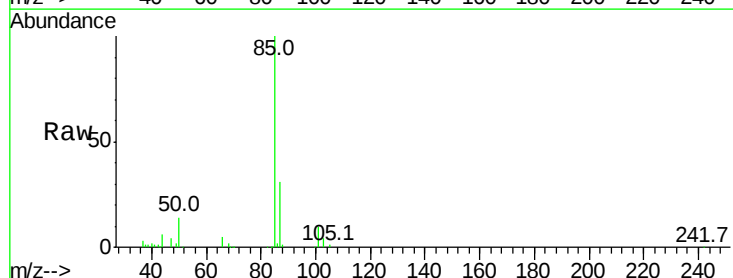
Acq: 14 Dec 2018 9:39

Tgt Ion: 85 Resp: 77526

Ion Ratio Lower Upper

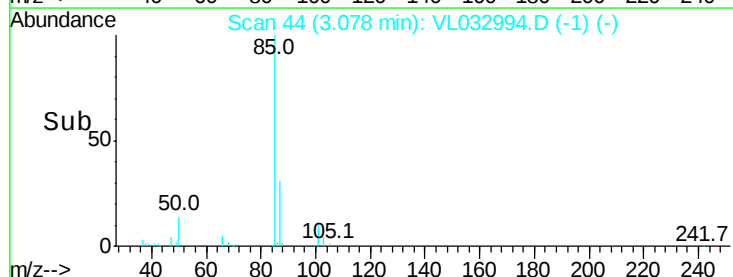
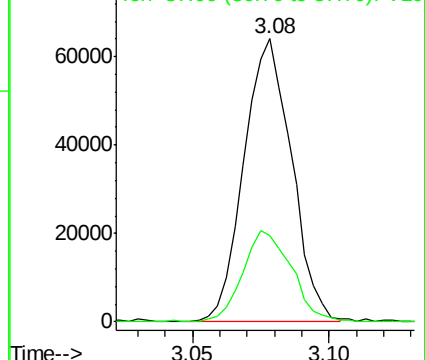
85 100

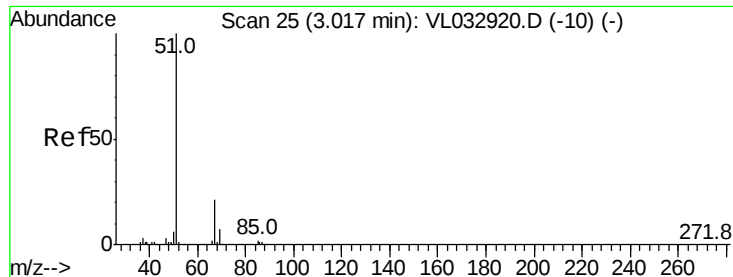
87 30.6 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.777 ppbv

RT: 2.99 min Scan# 17

Delta R.T. -0.03 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

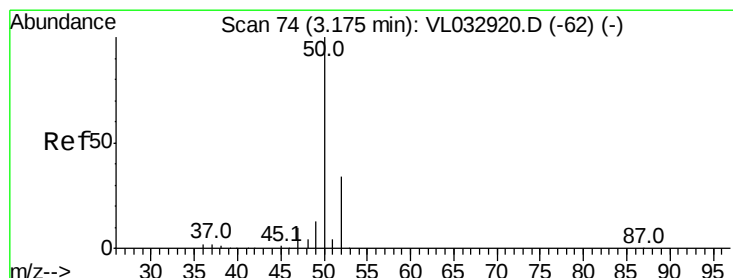
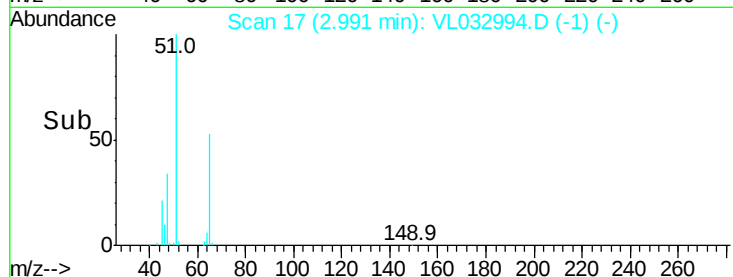
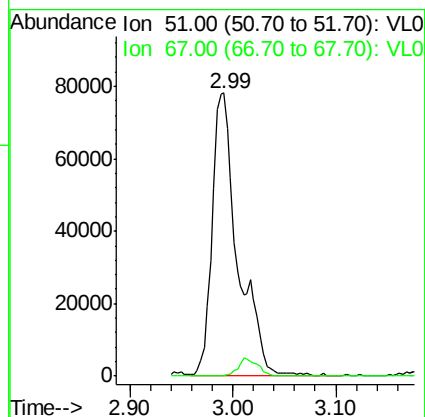
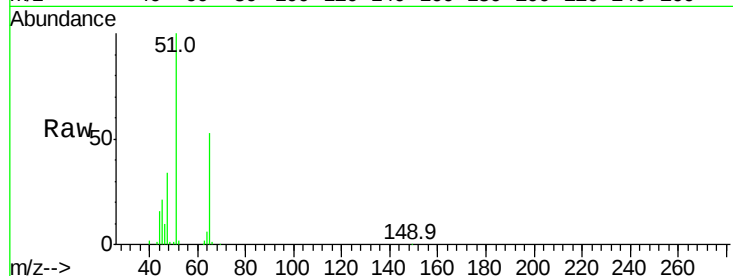
P00131-SG001-181212-01

Tgt Ion: 51 Resp: 135643

Ion Ratio Lower Upper

51 100

67 4.8 16.8 25.2#



#4

Chloromethane

Concen: 0.743 ppbv

RT: 3.17 min Scan# 74

Delta R.T. 0.00 min

Lab File: VL032994.D

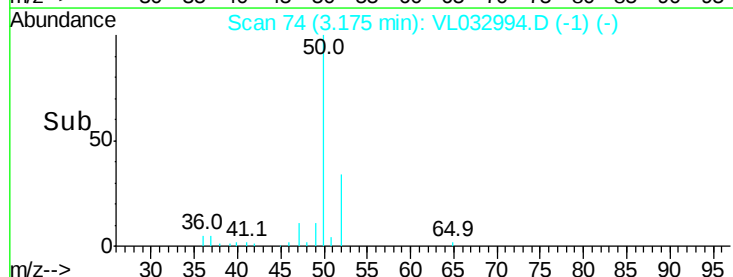
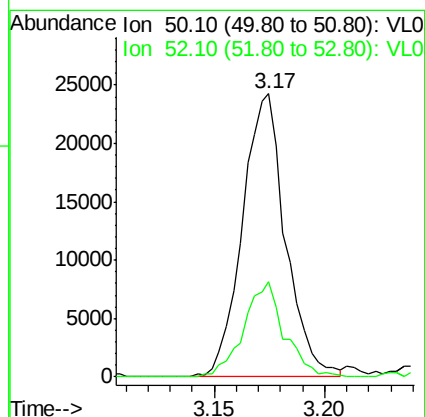
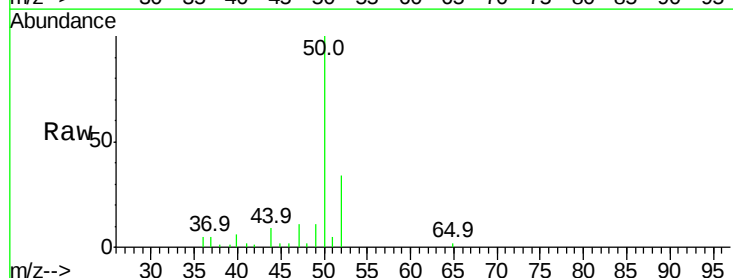
Acq: 14 Dec 2018 9:39

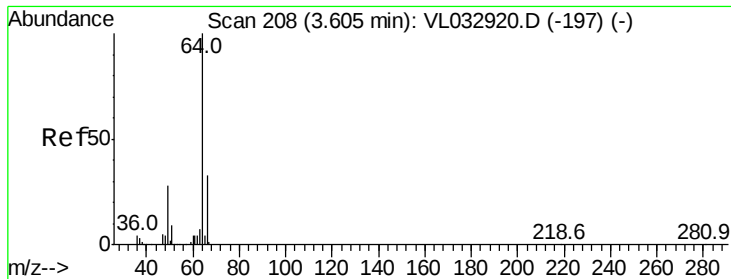
Tgt Ion: 50 Resp: 33006

Ion Ratio Lower Upper

50 100

52 33.7 27.3 40.9





#7

Chloroethane

Concen: 0.031 ppbv

RT: 3.60 min Scan# 206

Delta R.T. -0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

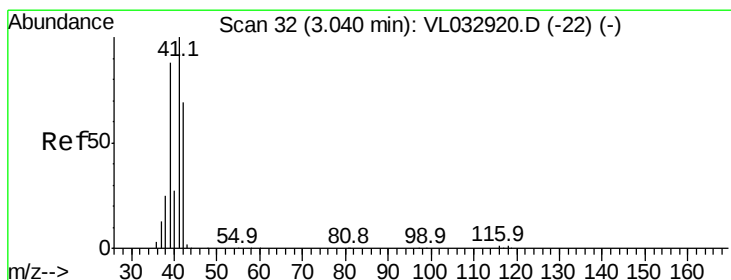
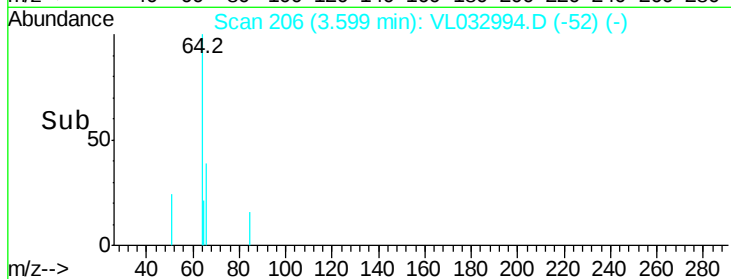
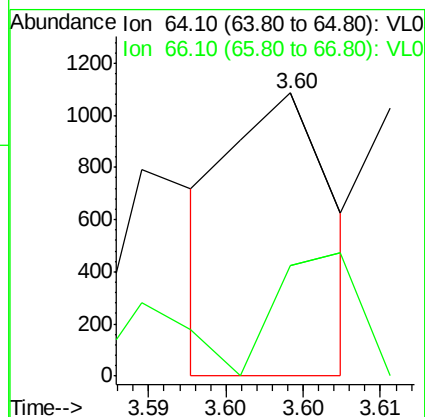
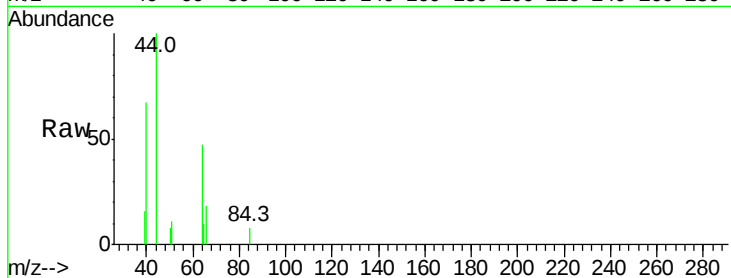
P00131-SG001-181212-01

Tgt Ion: 64 Resp: 505

Ion Ratio Lower Upper

64 100

66 32.6 26.6 40.0



#9

Propene

Concen: 1.394 ppbv

RT: 3.05 min Scan# 35

Delta R.T. 0.01 min

Lab File: VL032994.D

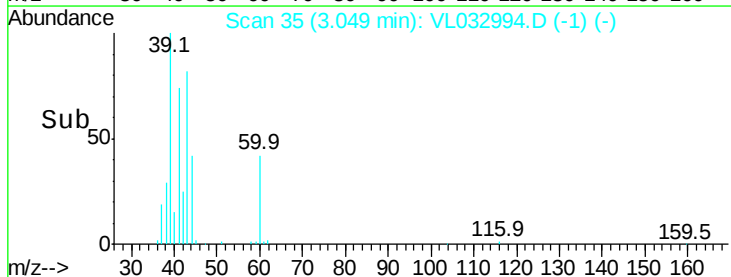
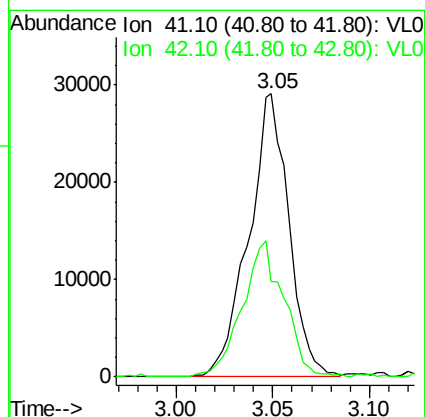
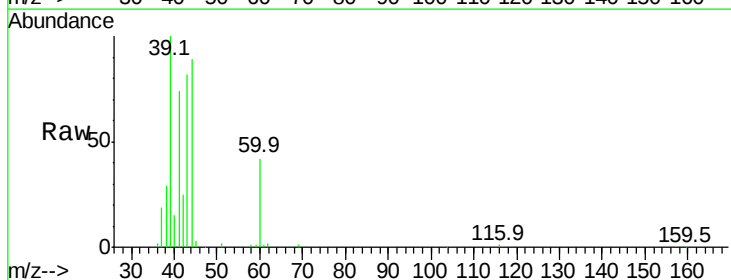
Acq: 14 Dec 2018 9:39

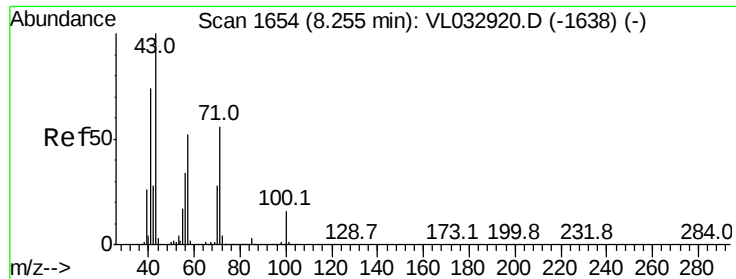
Tgt Ion: 41 Resp: 42055

Ion Ratio Lower Upper

41 100

42 50.2 56.2 84.2#

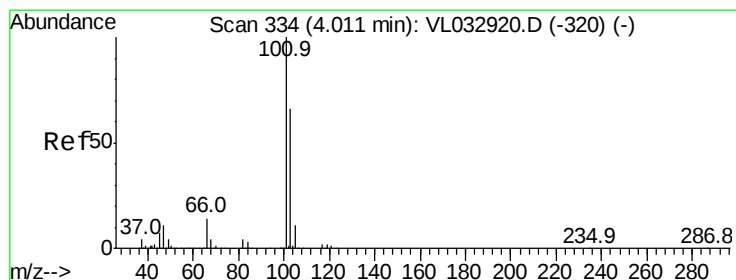
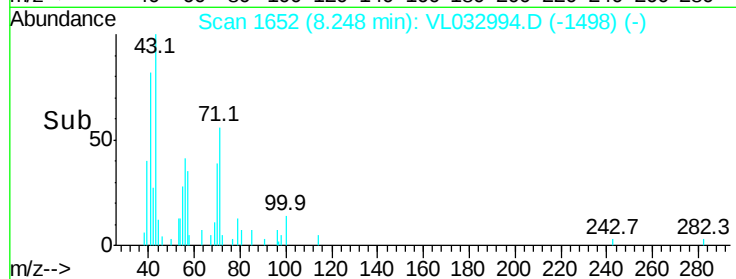
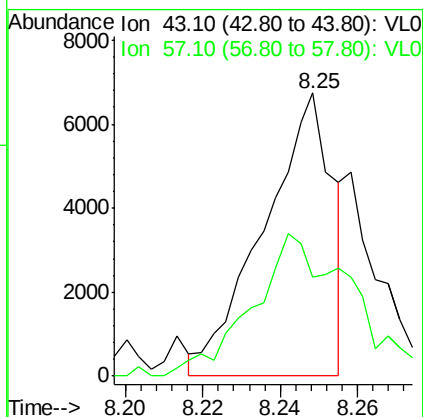
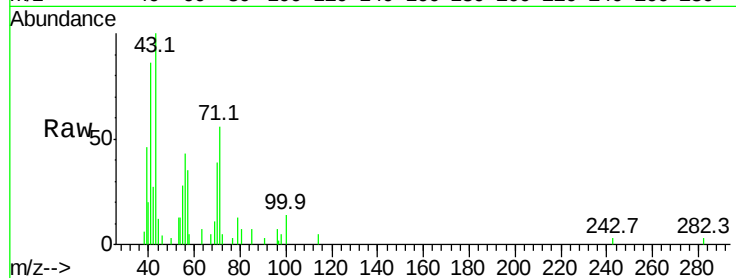




#10
 Heptane
 Concen: 0.073 ppbv
 RT: 8.25 min Scan# 1652
 Delta R.T. -0.01 min
 Lab File: VL032994.D
 Acq: 14 Dec 2018 9:39

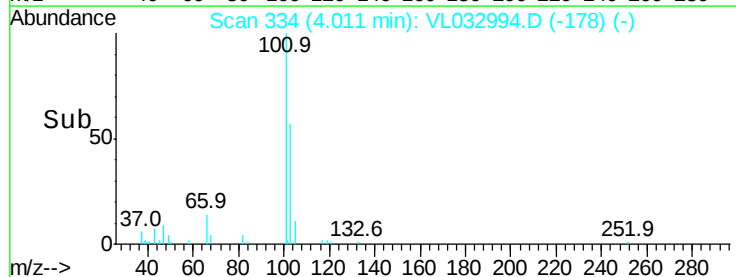
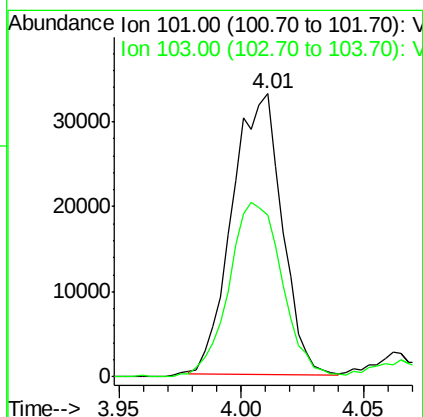
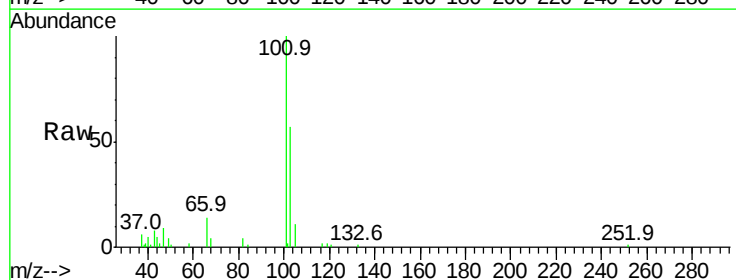
Instrument :
 MSVOA_L
 ClientSampleId :
 P00131-SG001-181212-01

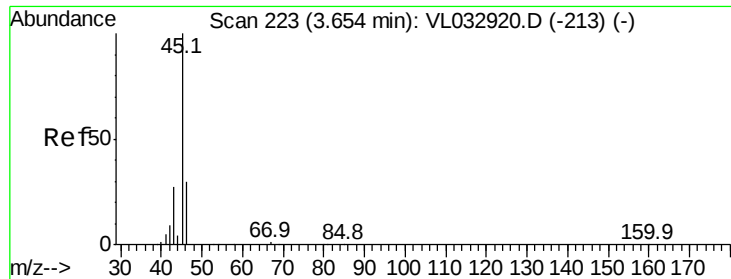
Tgt Ion: 43 Resp: 8299
 Ion Ratio Lower Upper
 43 100
 57 73.6 41.8 62.6#



#11
 Trichlorofluoromethane
 Concen: 0.368 ppbv
 RT: 4.01 min Scan# 334
 Delta R.T. 0.00 min
 Lab File: VL032994.D
 Acq: 14 Dec 2018 9:39

Tgt Ion: 101 Resp: 46586
 Ion Ratio Lower Upper
 101 100
 103 57.2 52.7 79.1





#13

Ethanol

Concen: 14.339 ppbv

RT: 3.65 min Scan# 223

Delta R.T. 0.00 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

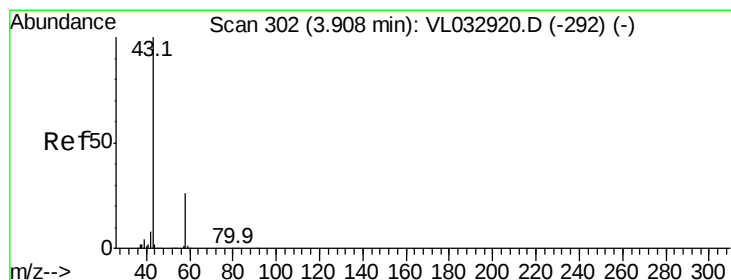
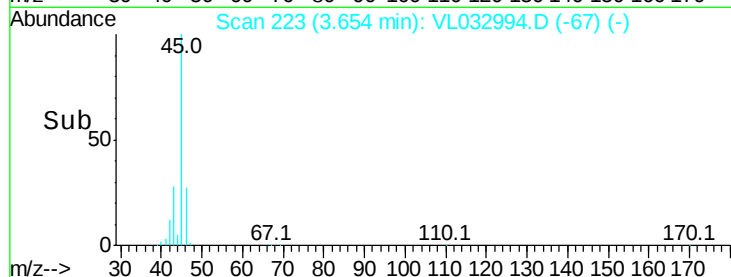
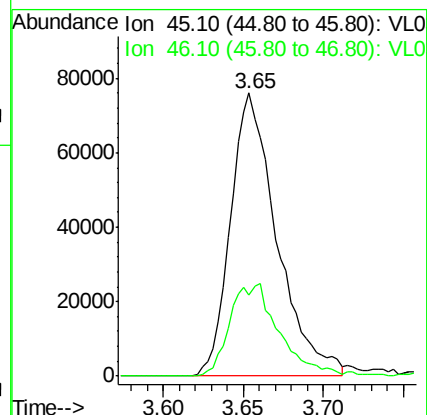
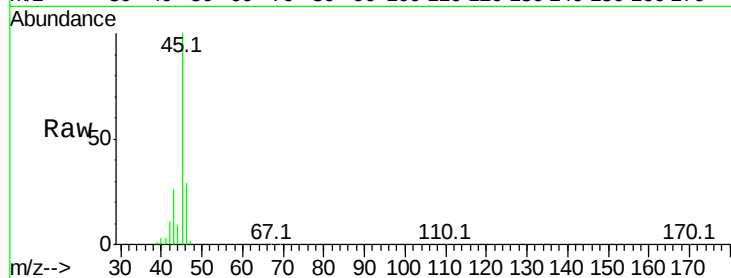
P00131-SG001-181212-01

Tgt Ion: 45 Resp: 148984

Ion Ratio Lower Upper

45 100

46 35.6 13.8 55.4



#15

Acetone

Concen: 13.745 ppbv

RT: 3.90 min Scan# 299

Delta R.T. -0.01 min

Lab File: VL032994.D

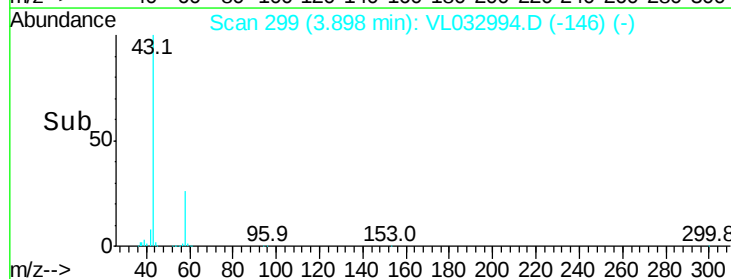
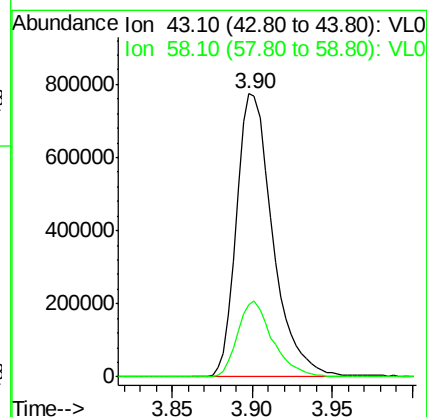
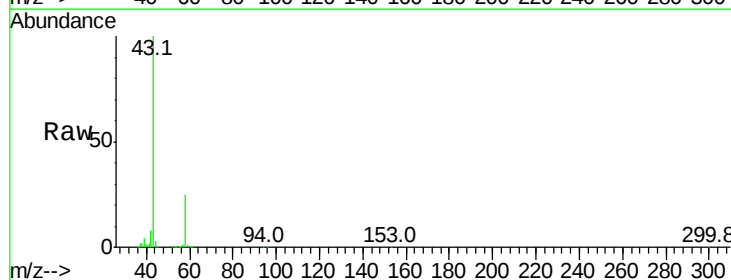
Acq: 14 Dec 2018 9:39

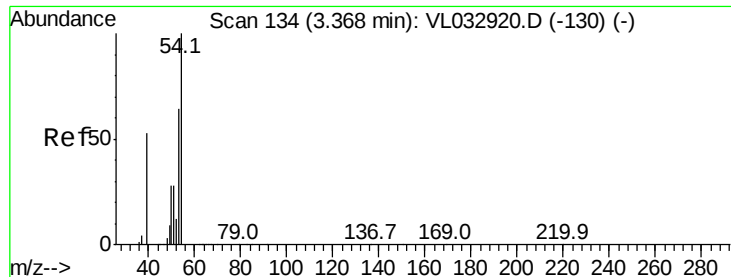
Tgt Ion: 43 Resp: 1188824

Ion Ratio Lower Upper

43 100

58 26.3 20.6 30.8





#16

1,3-Butadiene

Concen: 1.408 ppbv

RT: 3.35 min Scan# 127

Delta R.T. -0.02 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

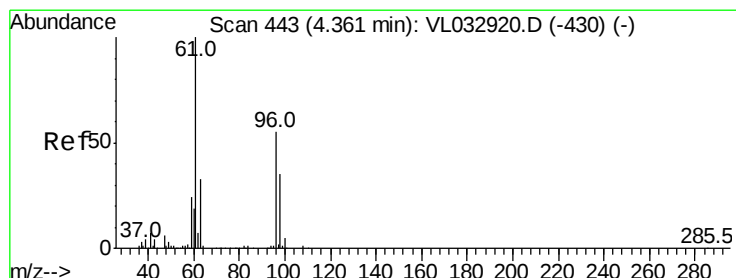
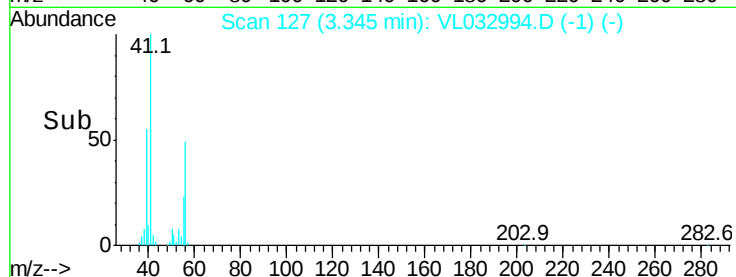
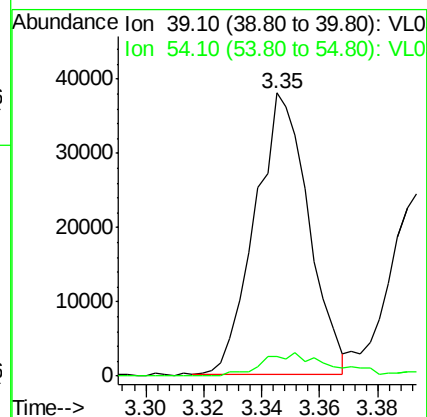
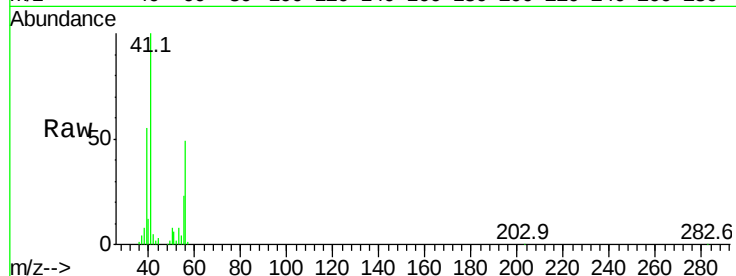
P00131-SG001-181212-01

Tgt Ion: 39 Resp: 48303

Ion Ratio Lower Upper

39 100

54 12.0 72.7 109.1#



#17

tert-Butyl alcohol

Concen: 0.620 ppbv

RT: 4.38 min Scan# 450

Delta R.T. 0.02 min

Lab File: VL032994.D

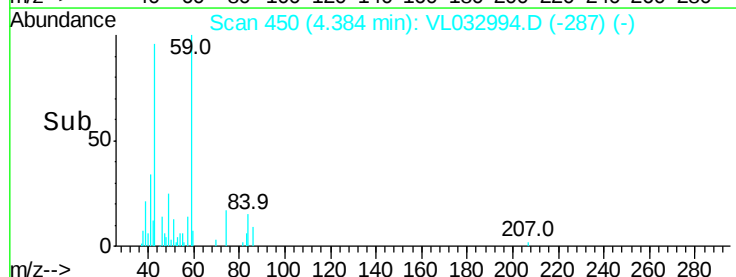
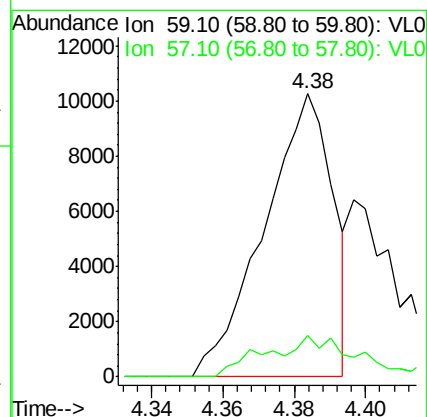
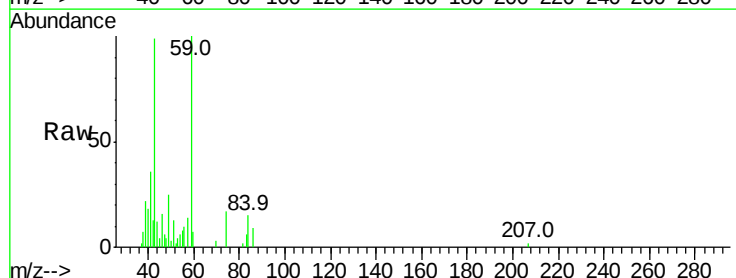
Acq: 14 Dec 2018 9:39

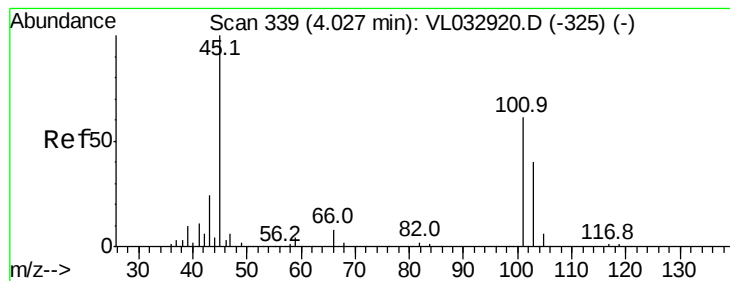
Tgt Ion: 59 Resp: 13650

Ion Ratio Lower Upper

59 100

57 20.8 0.6 1.0#





#19

Isopropyl Alcohol

Concen: 0.344 ppbv

RT: 4.04 min Scan# 343

Delta R.T. 0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

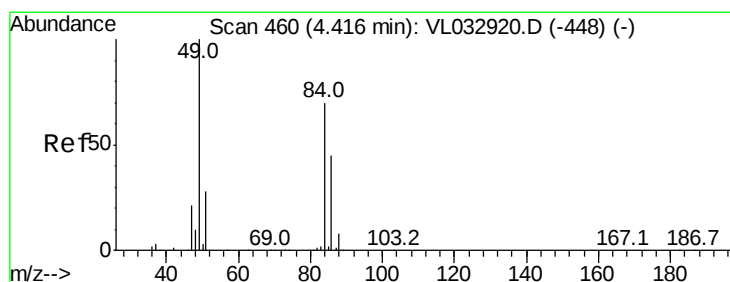
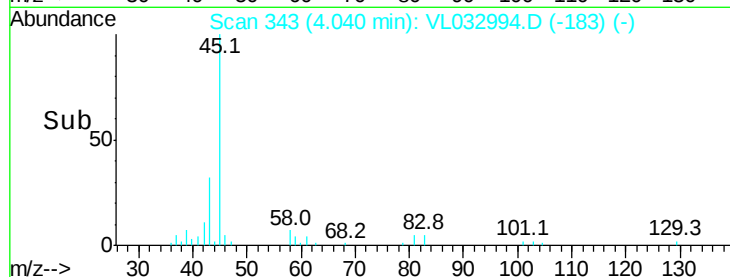
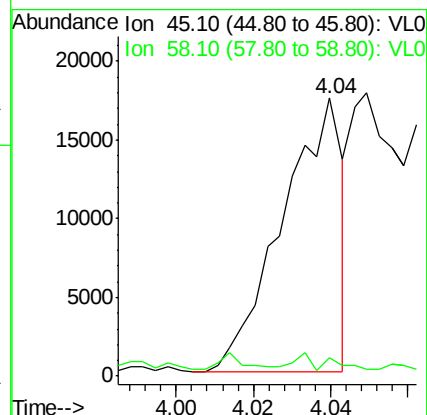
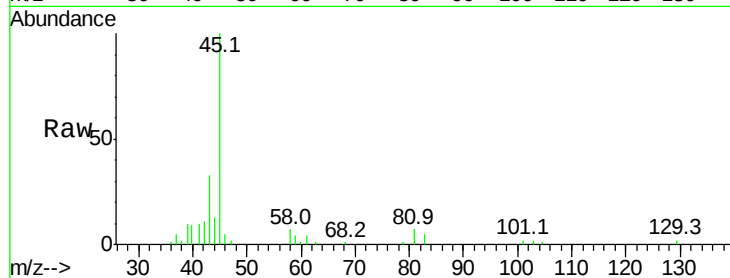
P00131-SG001-181212-01

Tgt Ion: 45 Resp: 18689

Ion Ratio Lower Upper

45 100

58 0.0 1.4 2.2#



#20

Methylene Chloride

Concen: 2.299 ppbv

RT: 4.41 min Scan# 458

Delta R.T. -0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Tgt Ion: 84 Resp: 97196

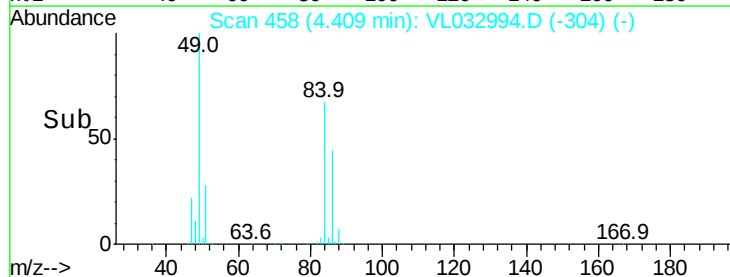
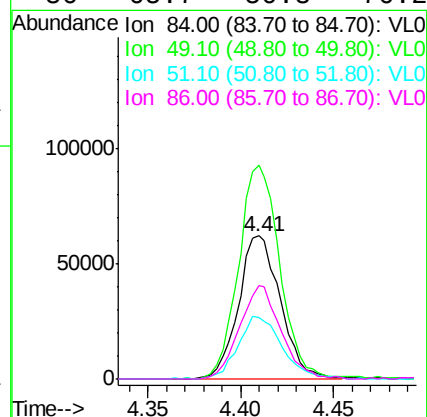
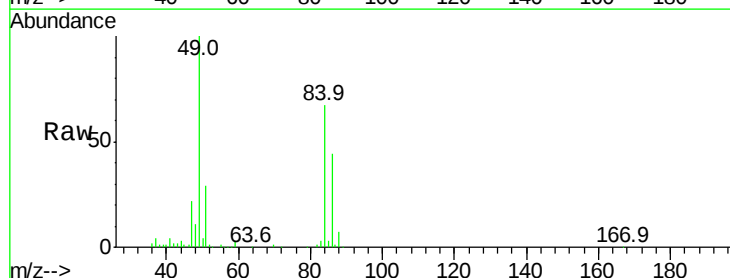
Ion Ratio Lower Upper

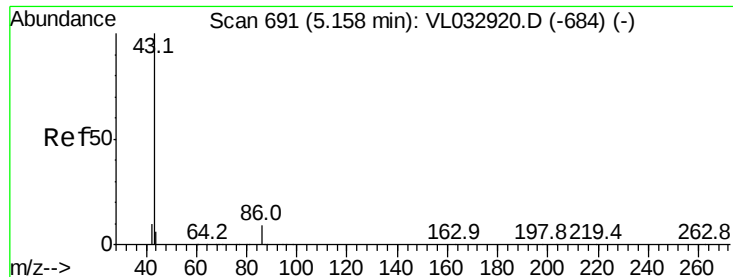
84 100

49 149.3 113.8 170.8

51 43.2 31.8 47.8

86 65.7 50.8 76.2





#23

Vinyl Acetate

Concen: 0.545 ppbv

RT: 5.14 min Scan# 686

Delta R.T. -0.02 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

P00131-SG001-181212-01

Tgt Ion: 43 Resp: 79755

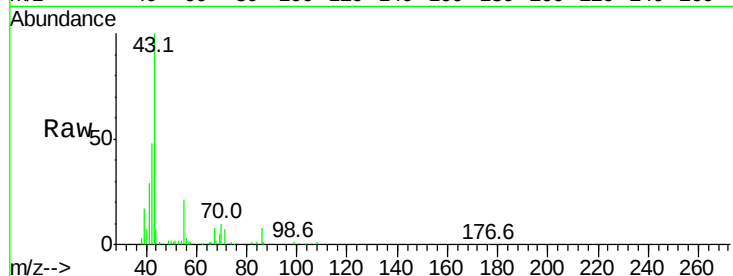
Ion Ratio Lower Upper

43 100

86 8.9 6.6 9.8

42 47.2 8.3 12.5#

44 5.5 4.2 6.4

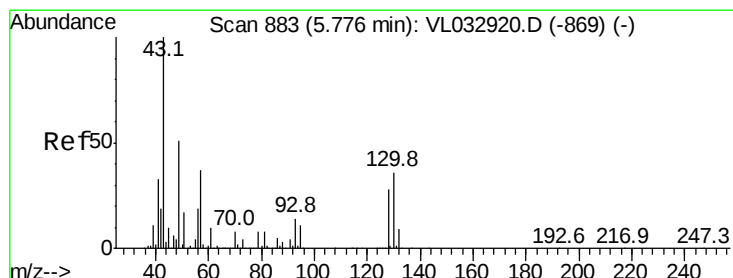
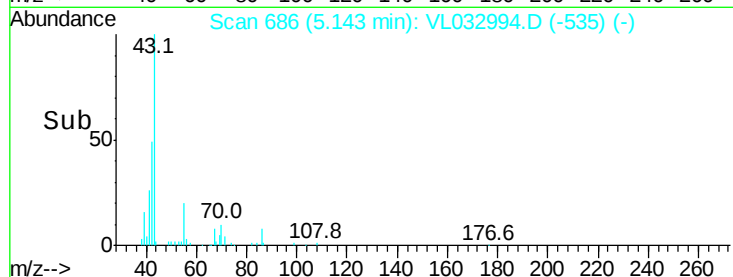
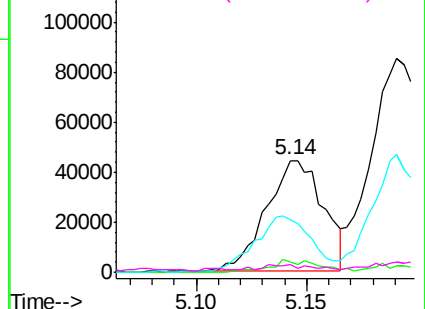


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.795 ppbv

RT: 5.78 min Scan# 884

Delta R.T. 0.00 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Tgt Ion: 43 Resp: 162353

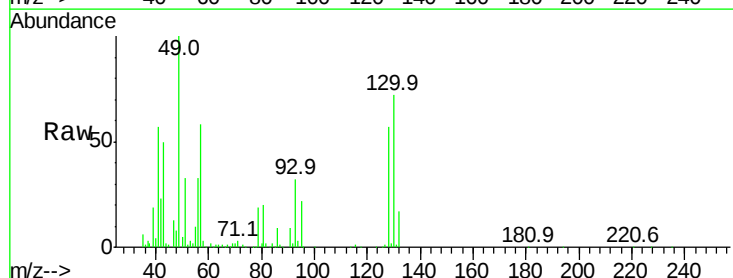
Ion Ratio Lower Upper

43 100

45 5.3 7.8 11.6#

61 4.2 7.4 11.2#

70 4.6 5.7 8.5#

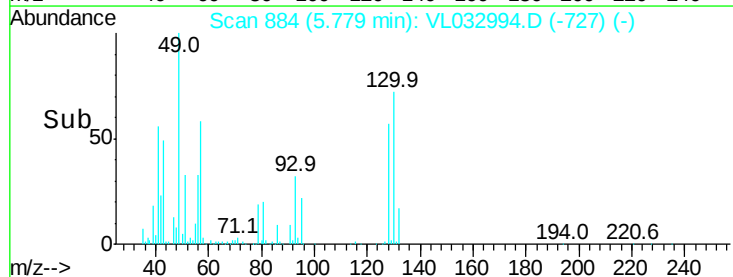
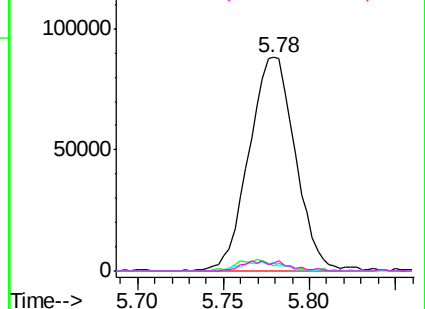


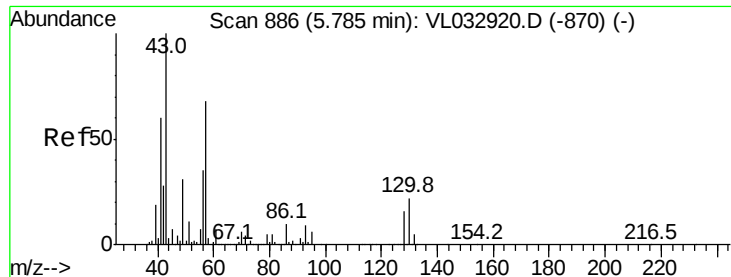
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

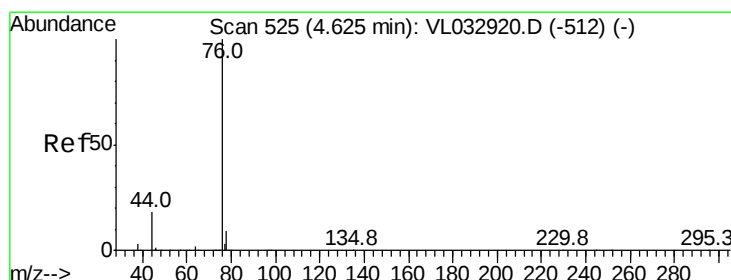
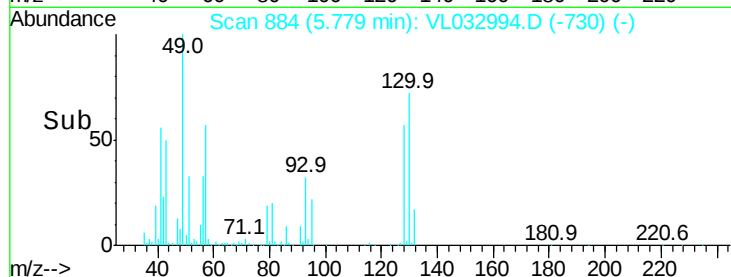
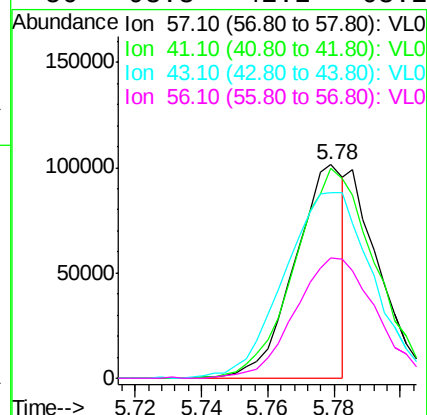
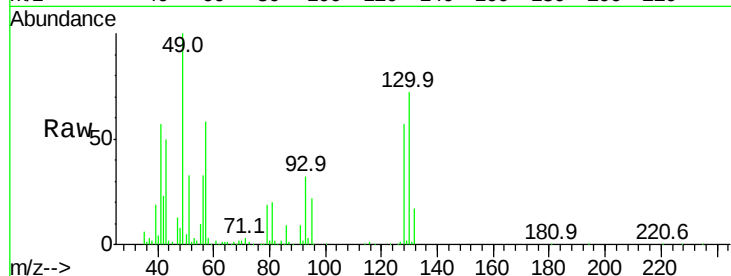




#26
Hexane
Concen: 1.112 ppbv
RT: 5.78 min Scan# 884
Delta R.T. -0.01 min
Lab File: VL032994.D
Acq: 14 Dec 2018 9:39

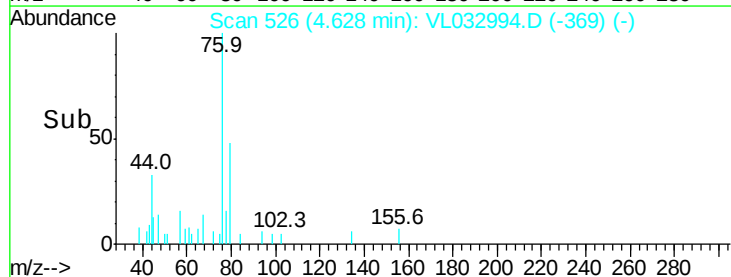
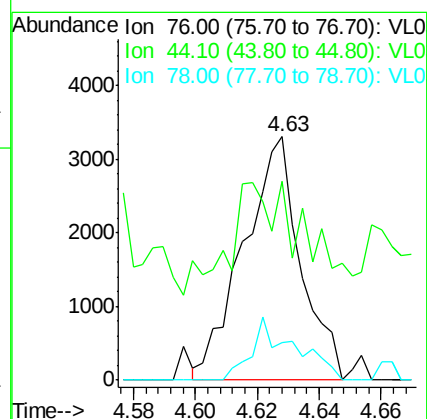
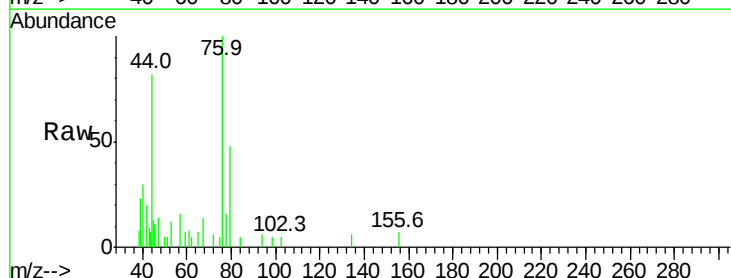
Instrument :
MSVOA_L
ClientSampleId :
P00131-SG001-181212-01

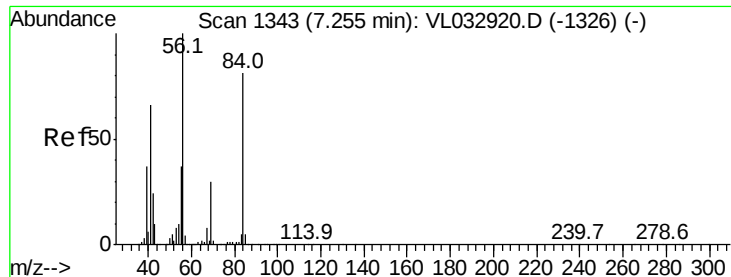
Tgt Ion: 57 Resp: 104861
Ion Ratio Lower Upper
57 100
41 161.0 72.2 108.2#
43 157.7 171.9 257.9#
56 93.3 42.2 63.2#



#27
Carbon Disulfide
Concen: 0.036 ppbv
RT: 4.63 min Scan# 526
Delta R.T. 0.00 min
Lab File: VL032994.D
Acq: 14 Dec 2018 9:39

Tgt Ion: 76 Resp: 4219
Ion Ratio Lower Upper
76 100
44 86.8 14.7 22.1#
78 21.9 7.4 11.2#





#30

Cyclohexane

Concen: 0.033 ppbv

RT: 7.24 min Scan# 1339

Delta R.T. -0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

P00131-SG001-181212-01

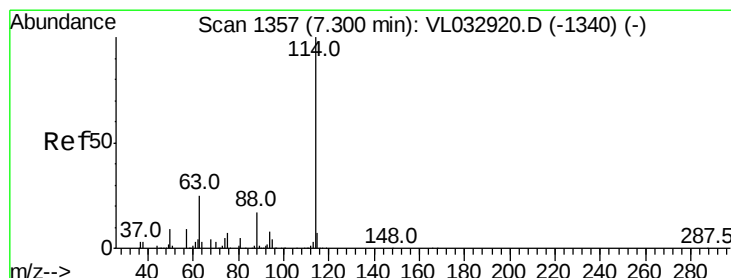
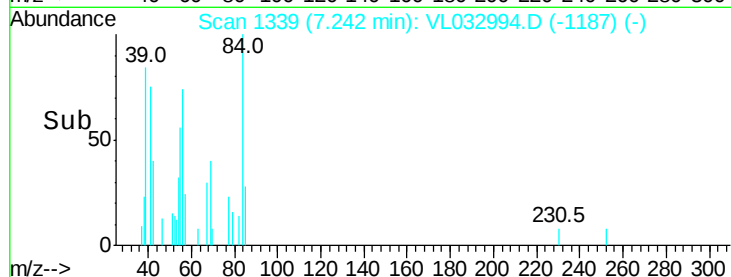
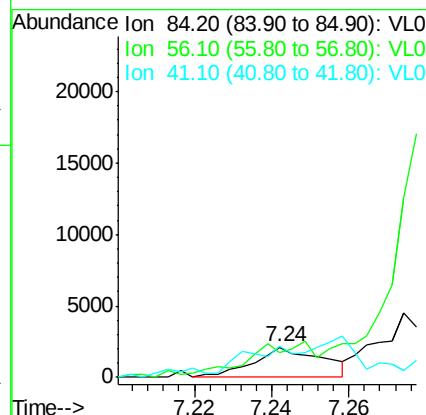
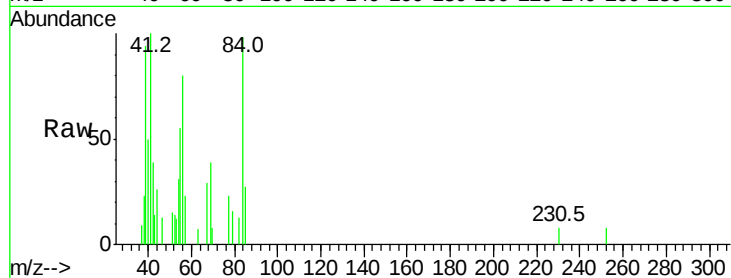
Tgt Ion: 84 Resp: 2606

Ion Ratio Lower Upper

84 100

56 0.0 102.5 153.7#

41 254.7 64.1 96.1#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.29 min Scan# 1355

Delta R.T. -0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

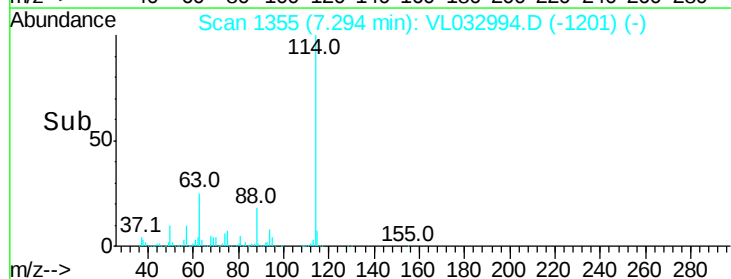
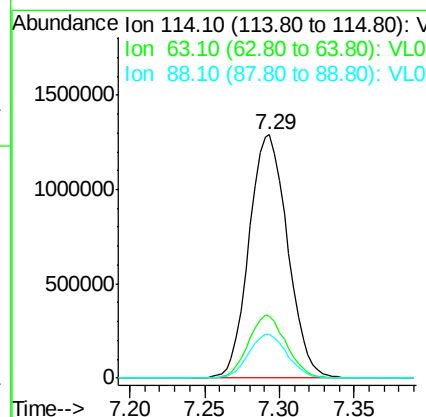
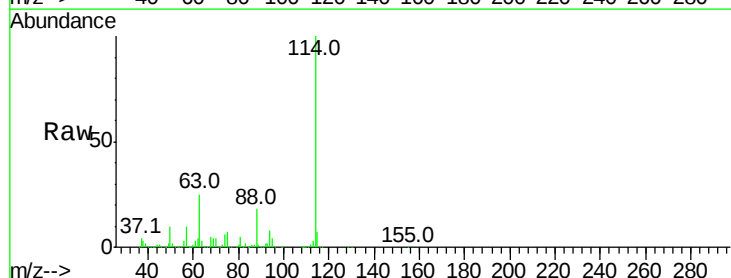
Tgt Ion: 114 Resp: 2315945

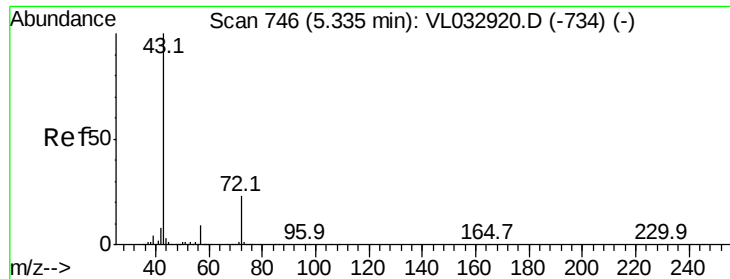
Ion Ratio Lower Upper

114 100

63 25.4 20.1 30.1

88 18.1 14.2 21.4





#34

2-Butanone

Concen: 0.866 ppbv

RT: 5.34 min Scan# 747

Delta R.T. 0.00 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

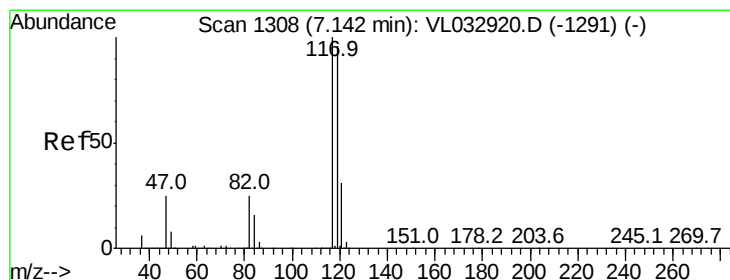
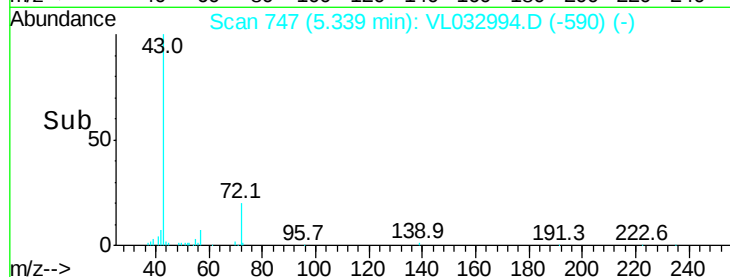
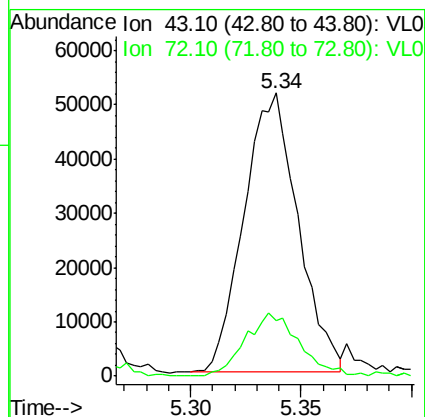
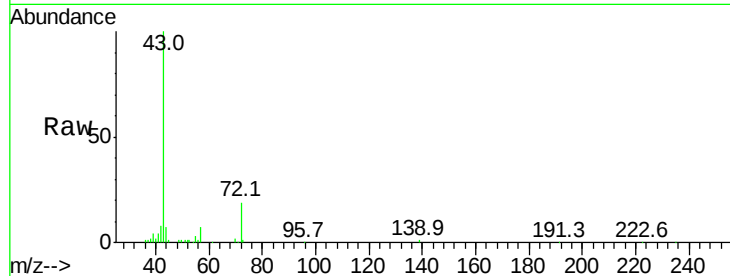
P00131-SG001-181212-01

Tgt Ion: 43 Resp: 87360

Ion Ratio Lower Upper

43 100

72 22.6 18.8 28.2



#35

Carbon Tetrachloride

Concen: 0.037 ppbv

RT: 7.13 min Scan# 1305

Delta R.T. -0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

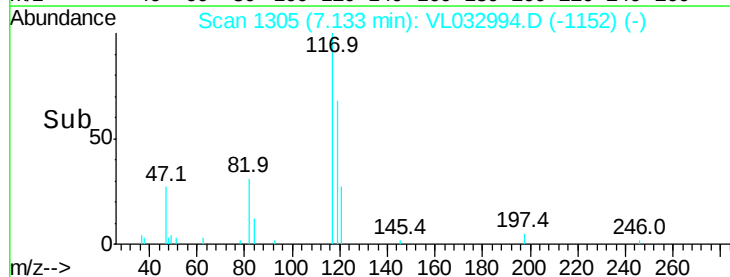
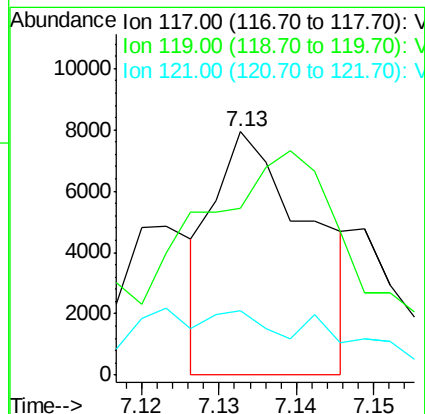
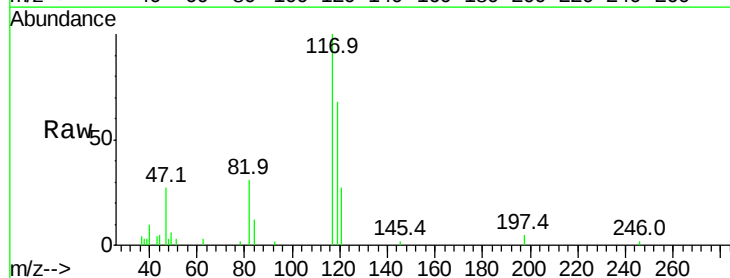
Tgt Ion: 117 Resp: 6821

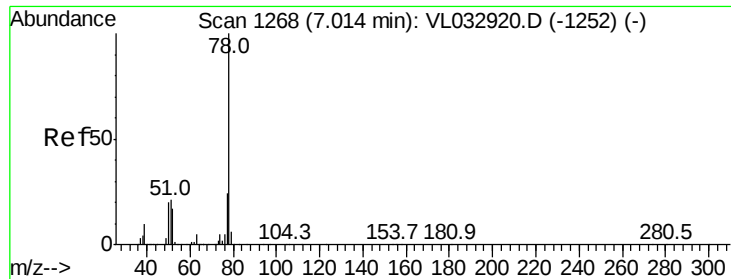
Ion Ratio Lower Upper

117 100

119 20.6 76.5 114.7#

121 30.4 24.5 36.7





#36

Benzene

Concen: 0.147 ppbv

RT: 7.01 min Scan# 1267

Delta R.T. -0.00 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

P00131-SG001-181212-01

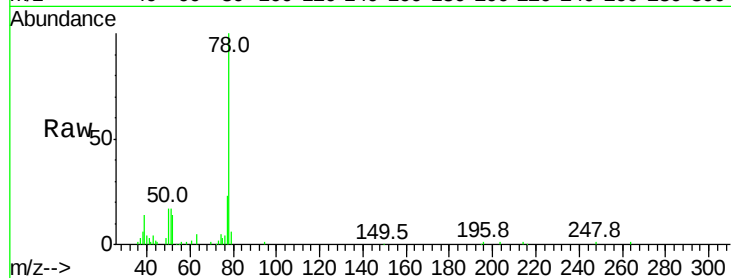
Tgt Ion: 78 Resp: 25061

Ion Ratio Lower Upper

78 100

77 22.6 18.9 28.3

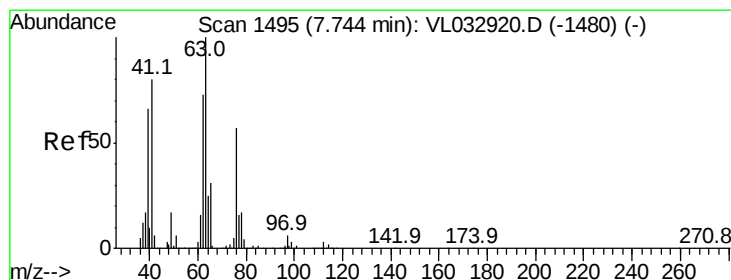
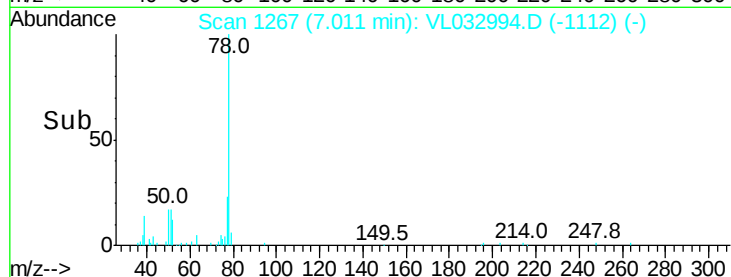
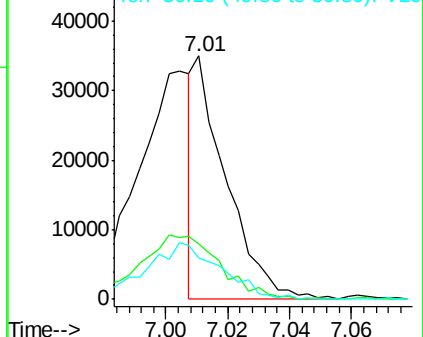
50 16.8 16.1 24.1



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



#39

1,2-Dichloropropane

Concen: 9.089 ppbv

RT: 7.29 min Scan# 1354

Delta R.T. -0.45 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

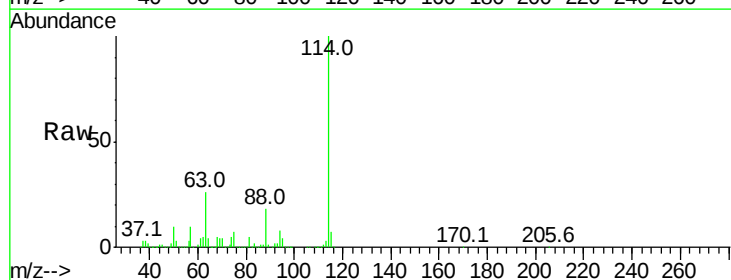
Tgt Ion: 63 Resp: 587189

Ion Ratio Lower Upper

63 100

41 0.0 63.9 95.9#

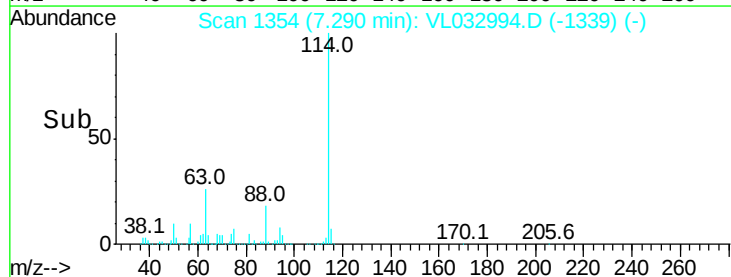
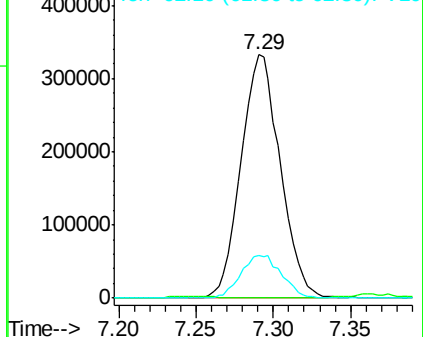
62 17.5 58.8 88.2#

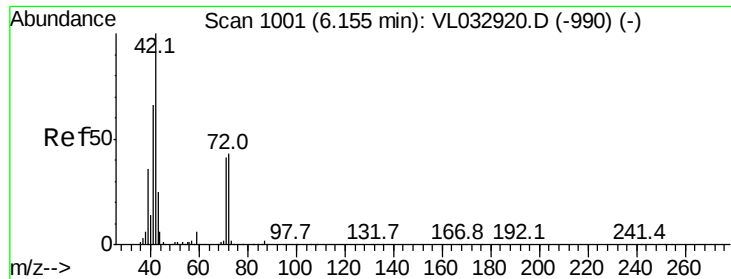


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#41

Tetrahydrofuran

Concen: 0.794 ppbv

RT: 6.17 min Scan# 1005

Delta R.T. 0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

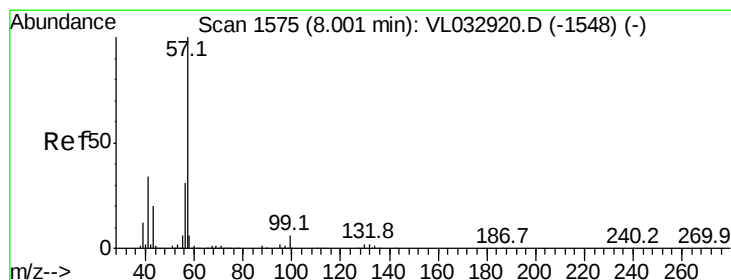
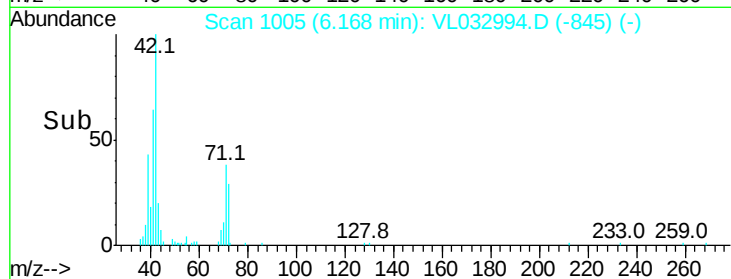
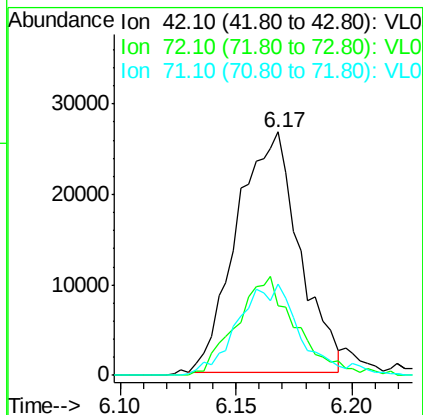
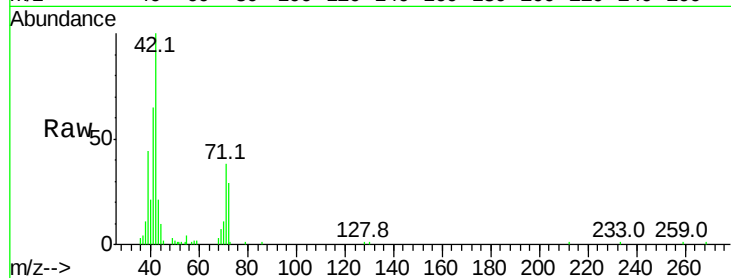
Instrument :

MSVOA_L

ClientSampleId :

P00131-SG001-181212-01

Tgt Ion:	42	Resp:	49844
Ion	Ratio	Lower	Upper
42	100		
72	39.6	32.9	49.3
71	38.4	32.0	48.0



#44

2,2,4-Trimethylpentane

Concen: 0.067 ppbv

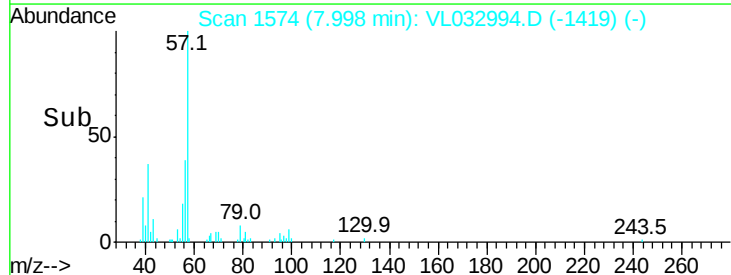
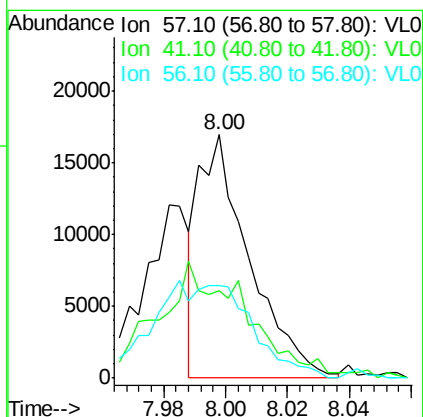
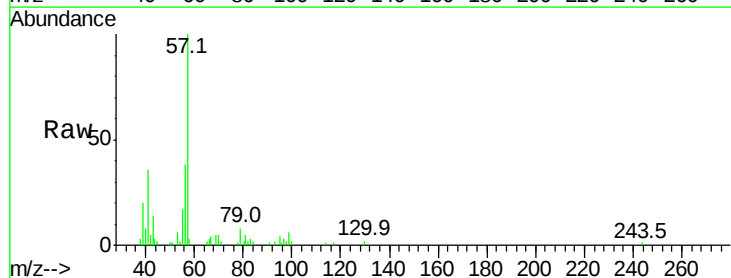
RT: 8.00 min Scan# 1574

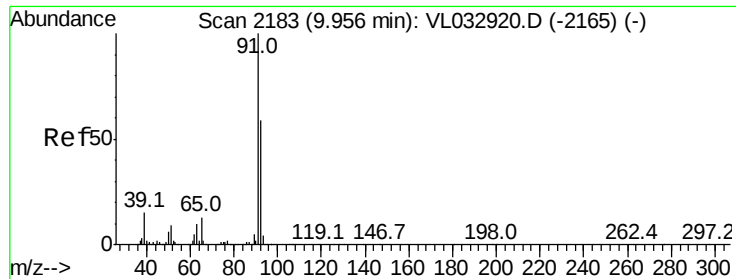
Delta R.T. -0.00 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Tgt Ion:	57	Resp:	19310
Ion	Ratio	Lower	Upper
57	100		
41	0.0	27.0	40.4#
56	0.0	24.6	37.0#





#53

Toluene

Concen: 6.415 ppbv

RT: 9.95 min Scan# 2180

Delta R.T. -0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

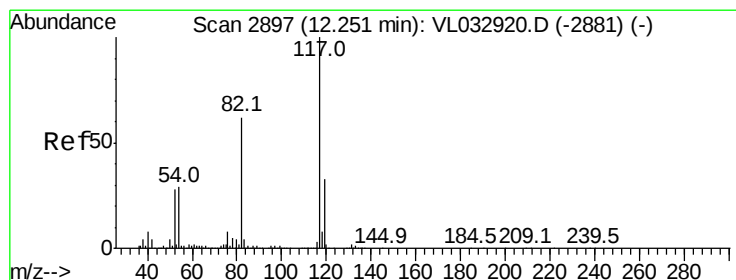
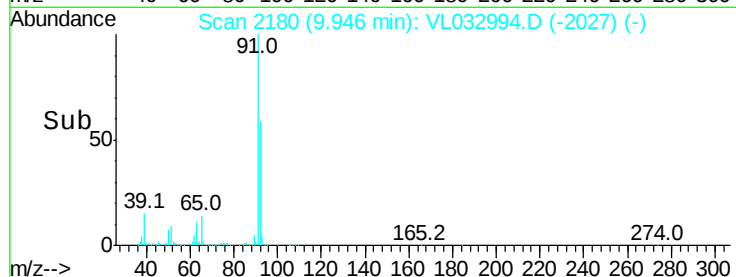
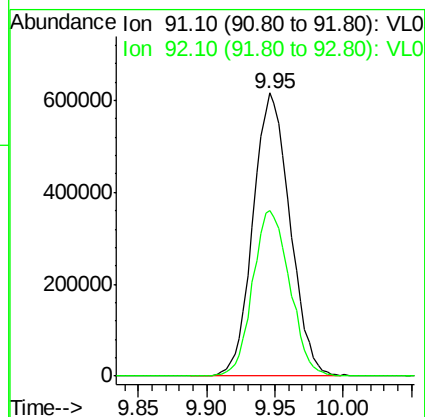
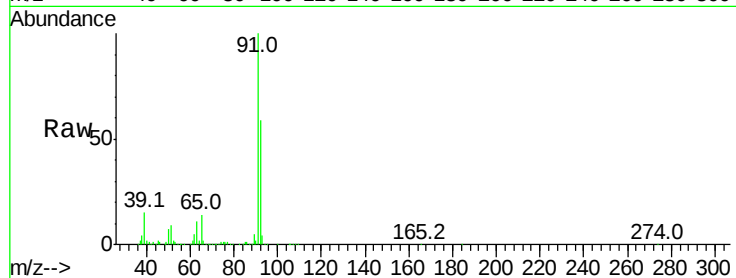
P00131-SG001-181212-01

Tgt Ion: 91 Resp: 1158856

Ion Ratio Lower Upper

91 100

92 58.9 47.4 71.0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2894

Delta R.T. -0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

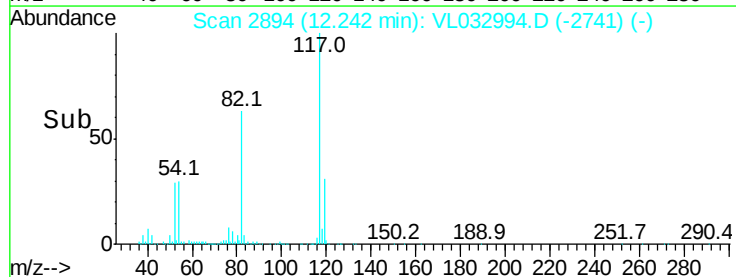
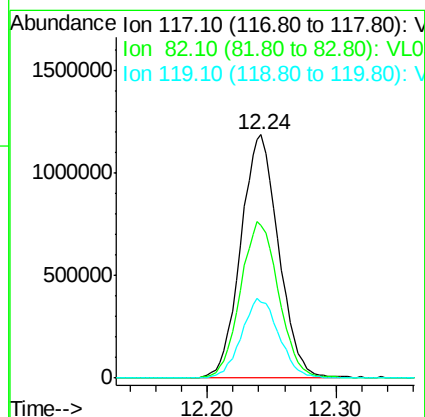
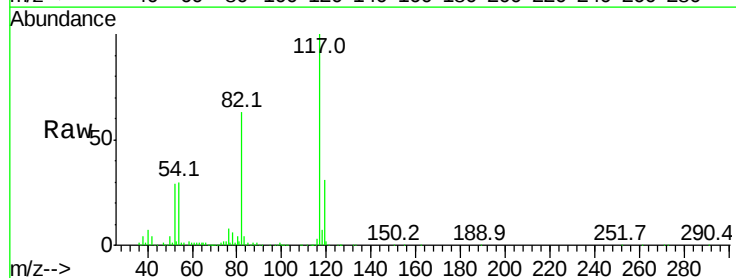
Tgt Ion: 117 Resp: 2410726

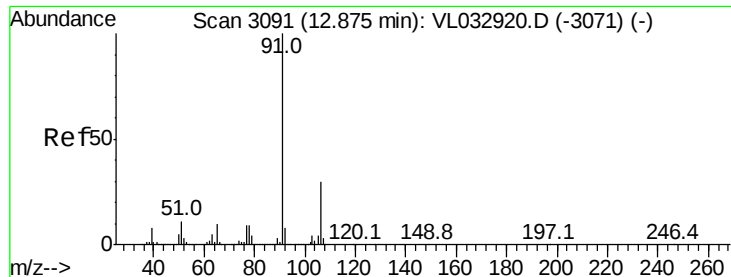
Ion Ratio Lower Upper

117 100

82 65.5 47.8 71.8

119 32.6 43.1 64.7#





#58

Ethyl Benzene

Concen: 0.178 ppbv

RT: 12.87 min Scan# 3089

Delta R.T. -0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

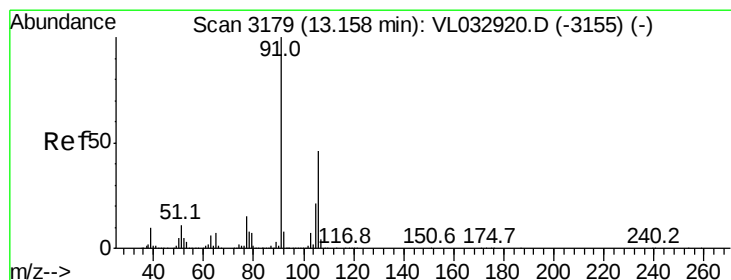
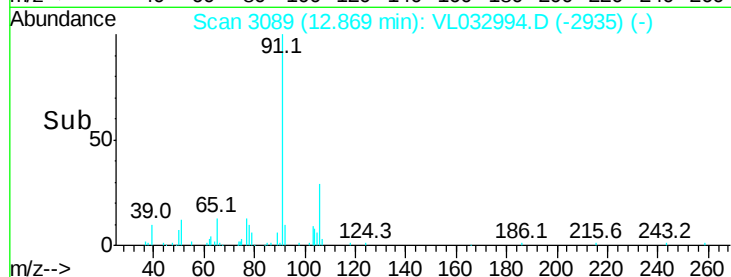
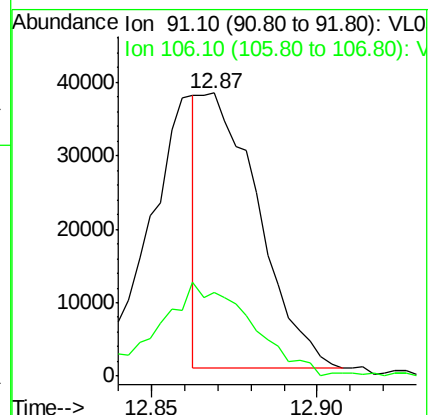
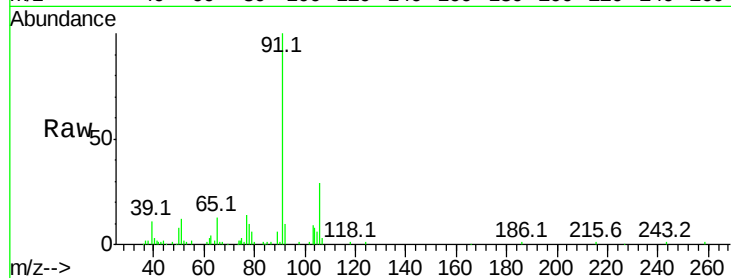
P00131-SG001-181212-01

Tgt Ion: 91 Resp: 45721

Ion Ratio Lower Upper

91 100

106 29.2 23.9 35.9



#59

m/p-Xylene

Concen: 1.572 ppbv

RT: 13.13 min Scan# 3169

Delta R.T. -0.03 min

Lab File: VL032994.D

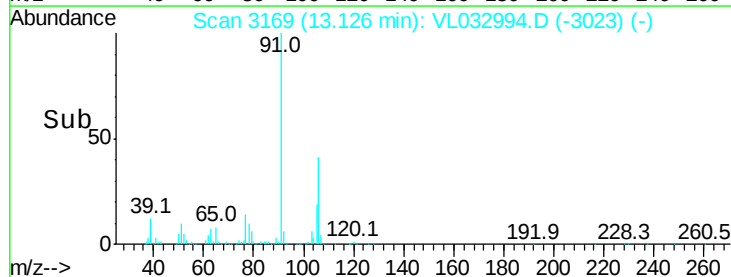
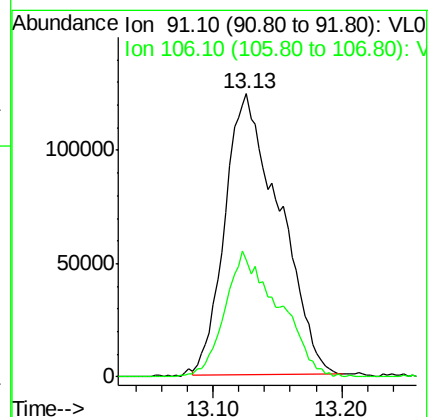
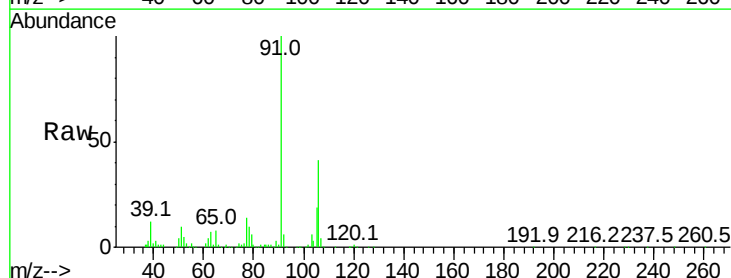
Acq: 14 Dec 2018 9:39

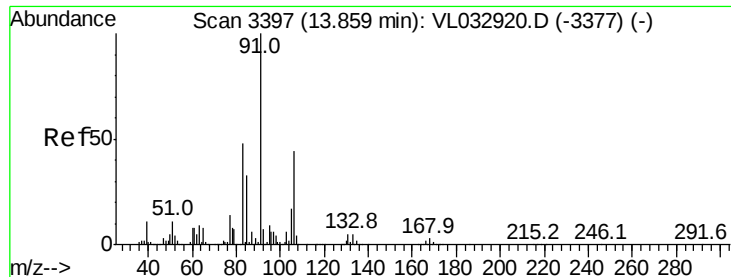
Tgt Ion: 91 Resp: 366511

Ion Ratio Lower Upper

91 100

106 43.7 0.0 0.0#

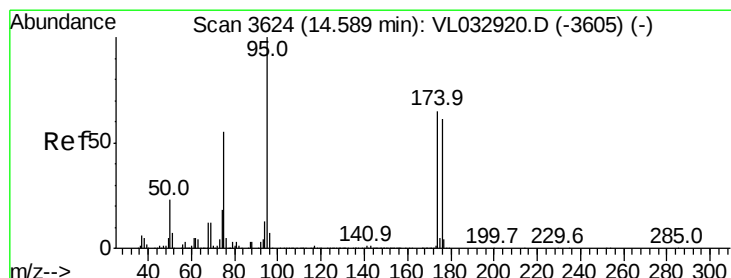
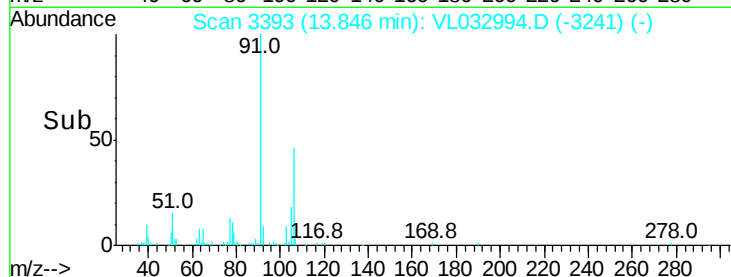
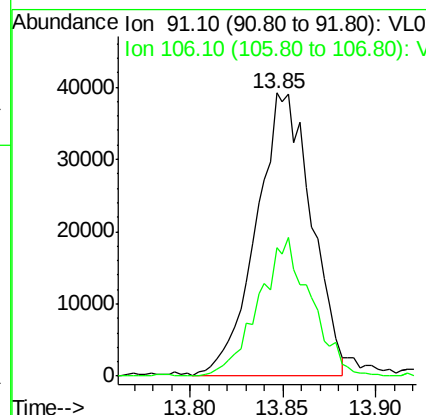
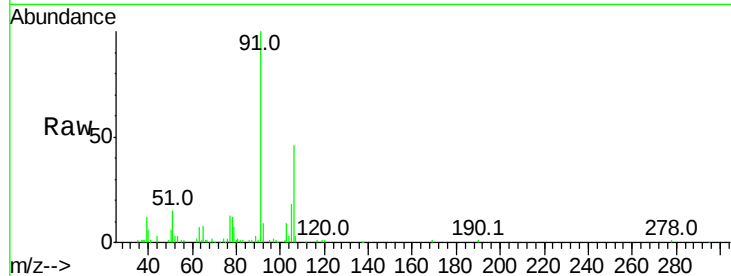




#60
o-Xylene
Concen: 0.346 ppbv
RT: 13.85 min Scan# 3393
Delta R.T. -0.01 min
Lab File: VL032994.D
Acq: 14 Dec 2018 9:39

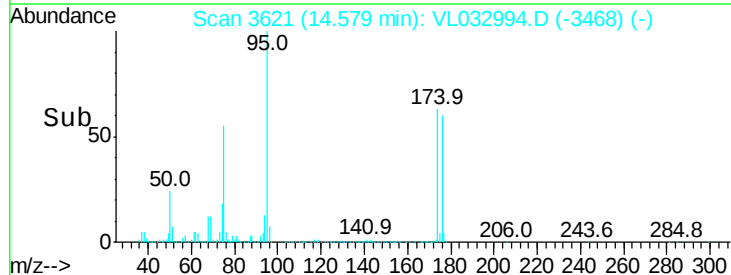
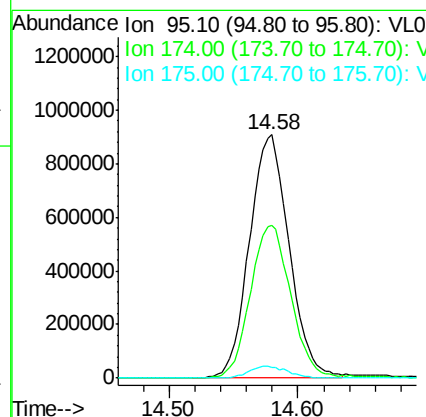
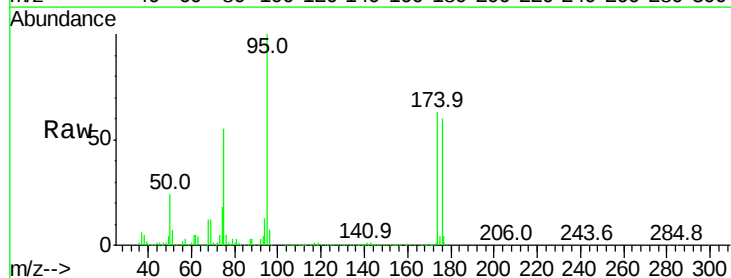
Instrument :
MSVOA_L
ClientSampleId :
P00131-SG001-181212-01

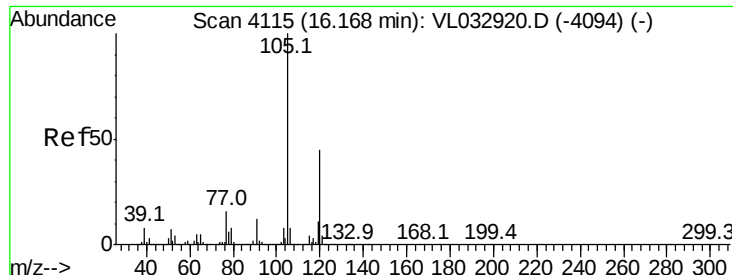
Tgt Ion: 91 Resp: 81449
Ion Ratio Lower Upper
91 100
106 46.2 21.9 65.8



#68
1-Bromo-4-Fluorobenzene
Concen: 10.970 ppbv
RT: 14.58 min Scan# 3621
Delta R.T. -0.01 min
Lab File: VL032994.D
Acq: 14 Dec 2018 9:39

Tgt Ion: 95 Resp: 1953851
Ion Ratio Lower Upper
95 100
174 65.1 51.4 77.0
175 4.7 3.8 5.6





#73

1,3,5-Trimethylbenzene

Concen: 0.033 ppbv

RT: 16.16 min Scan# 4112

Delta R.T. -0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Instrument :

MSVOA_L

ClientSampleId :

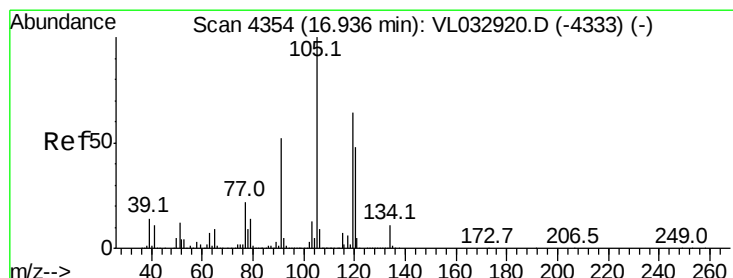
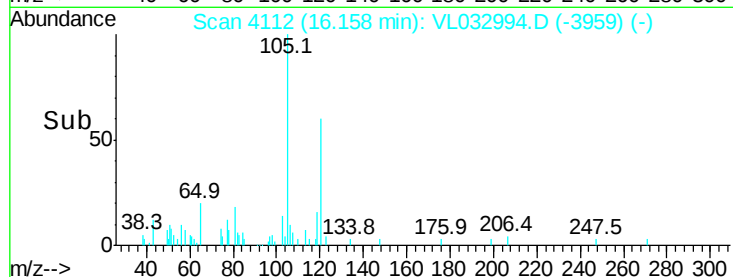
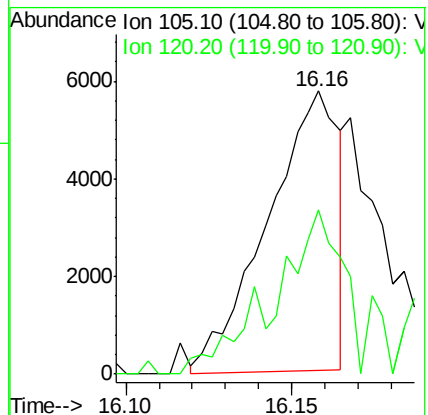
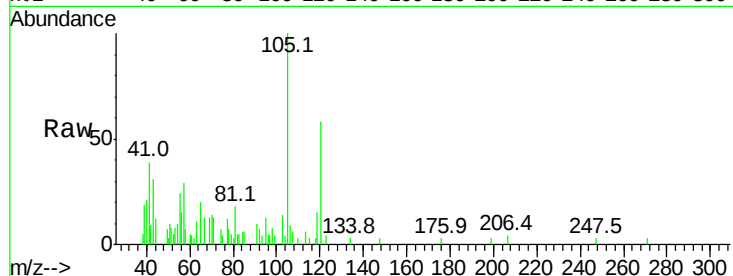
P00131-SG001-181212-01

Tgt Ion:105 Resp: 8575

Ion Ratio Lower Upper

105 100

120 54.4 36.0 54.0#



#74

1,2,4-Trimethylbenzene

Concen: 0.185 ppbv

RT: 16.93 min Scan# 4351

Delta R.T. -0.01 min

Lab File: VL032994.D

Acq: 14 Dec 2018 9:39

Tgt Ion:105 Resp: 53660

Ion Ratio Lower Upper

105 100

120 40.5 38.6 58.0

91 17.6 41.7 62.5#

77 16.9 17.4 26.2#

