

Data File : VL034689.D
Acq On : 26 Feb 2020 15:39
Operator : SY/AP
Sample : L1664-01
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
CR-103-BRW

Quant Time: Feb 27 07:27:51 2020
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL022620AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Feb 26 06:58:15 2020
QLast Update : Wed Feb 26 06:58:15 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	914302	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	1905845	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.11	117	1848128	10.00	ppbv	0.00

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.45 95 1557498 10.28 ppbv 0.00
Spiked Amount 10.000 Range 65 - 135 Recovery = 102.80%

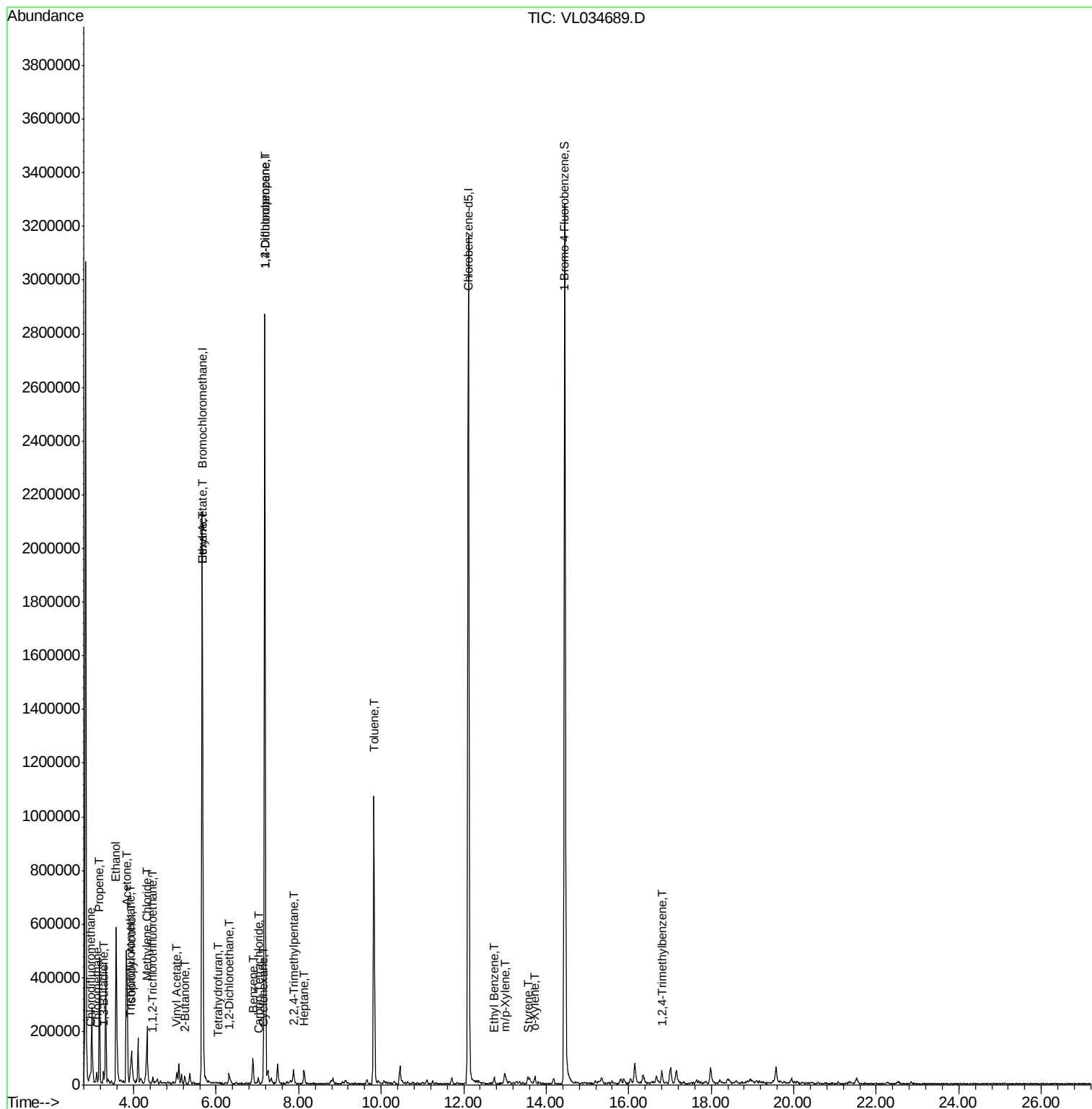
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Chlorodifluoromethane	2.95	51	47000	0.476	ppbv #	88
4) Chloromethane	3.11	50	29700	0.538	ppbv	90
9) Propene	3.17	41	113805	2.759	ppbv	93
10) Heptane	8.13	43	6530	0.062	ppbv #	4
11) Trichlorofluoromethane	3.92	101	36070	0.286	ppbv	90
12) 1,1,2-Trichlorotrifluoroet	4.46	101	5276	0.059	ppbv #	73
13) Ethanol	3.57	45	605857	46.498	ppbv	97
15) Acetone	3.82	43	539843	5.182	ppbv	94
16) 1,3-Butadiene	3.27	39	14495	0.301	ppbv #	53
19) Isopropyl Alcohol	3.95	45	58447	0.942	ppbv #	73
20) Methylene Chloride	4.32	84	63286	1.633	ppbv	88
23) Vinyl Acetate	5.06	43	3436	0.024	ppbv #	6
25) Ethyl Acetate	5.68	43	129770	0.704	ppbv #	81
26) Hexane	5.68	57	172319	2.027	ppbv #	43
30) Cyclohexane	7.13	84	2602	0.039	ppbv #	39
34) 2-Butanone	5.24	43	19375	0.162	ppbv #	53
35) Carbon Tetrachloride	7.02	117	3914	0.031	ppbv #	80
36) Benzene	6.89	78	64657	0.393	ppbv	99
37) 1,2-Dichloroethane	6.30	62	2954	0.028	ppbv #	82
39) 1,2-Dichloropropane	7.18	63	541480	8.268	ppbv #	23
41) Tetrahydrofuran	6.05	42	1750	0.028	ppbv #	36
44) 2,2,4-Trimethylpentane	7.88	57	19055	0.066	ppbv #	35
53) Toluene	9.82	91	764008	4.364	ppbv	98
58) Ethyl Benzene	12.75	91	5033	0.023	ppbv	96
59) m/p-Xylene	13.02	91	6077	0.031	ppbv #	32
60) o-Xylene	13.72	91	14966	0.077	ppbv	88
61) Styrene	13.56	104	4999	0.040	ppbv #	1
74) 1,2,4-Trimethylbenzene	16.79	105	12478	0.055	ppbv #	65

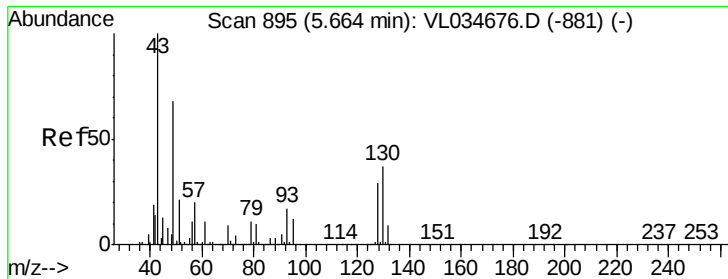
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.00 min

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Instrument :

MSVOA_L

ClientSampleId :

CR-103-BRW

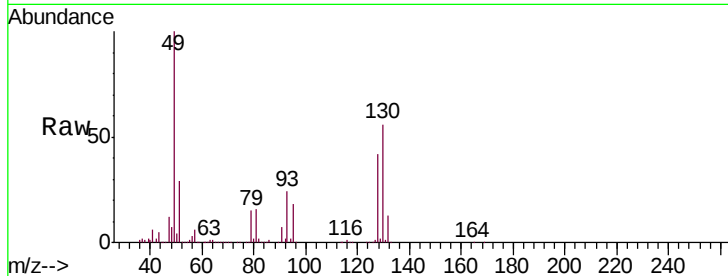
Tgt Ion: 49 Resp: 914302

Ion Ratio Lower Upper

49 100

128 43.6 21.6 65.0

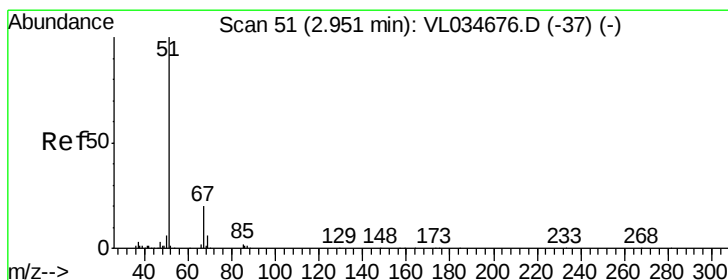
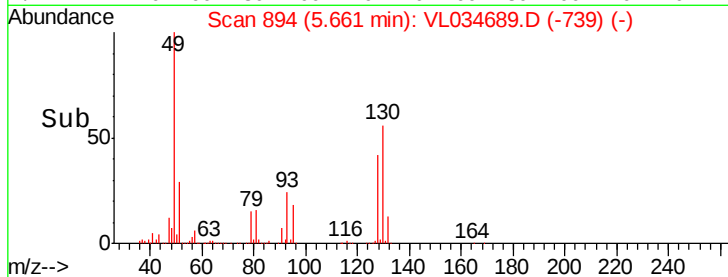
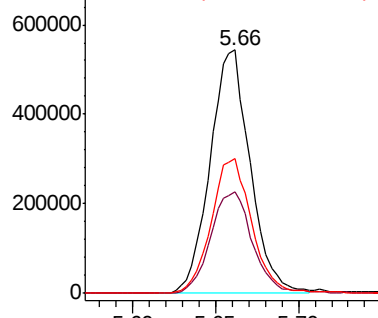
130 56.3 27.7 83.1



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



#3

Chlorodifluoromethane

Concen: 0.476 ppbv

RT: 2.95 min Scan# 51

Delta R.T. 0.00 min

Lab File: VL034689.D

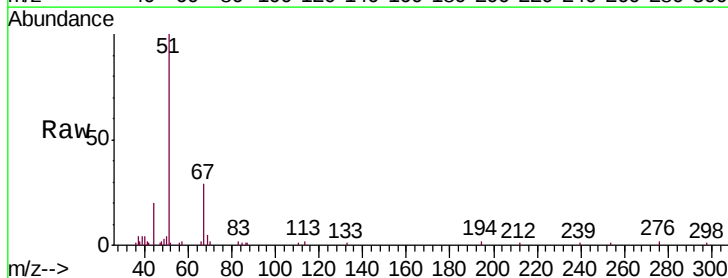
Acq: 26 Feb 2020 15:39

Tgt Ion: 51 Resp: 47000

Ion Ratio Lower Upper

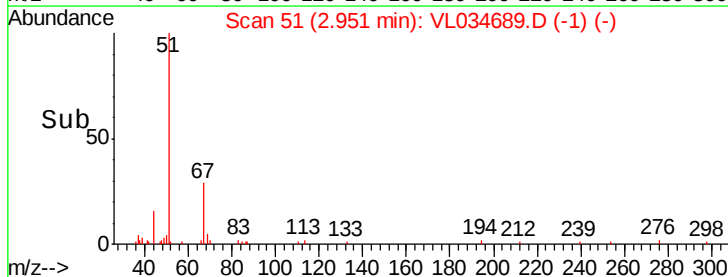
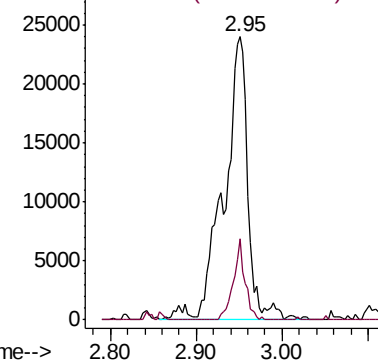
51 100

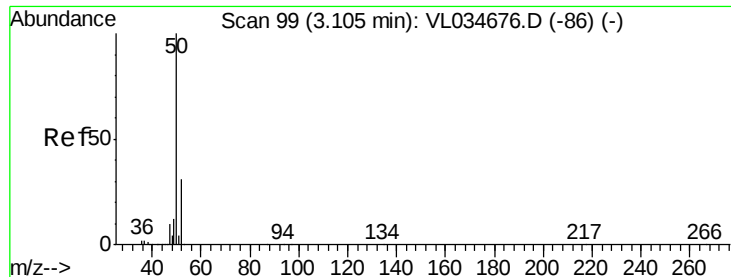
67 13.9 15.5 23.3#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.538 ppbv

RT: 3.11 min Scan# 99

Delta R.T. 0.00 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

Instrument :

MSVOA_L

ClientSampleId :

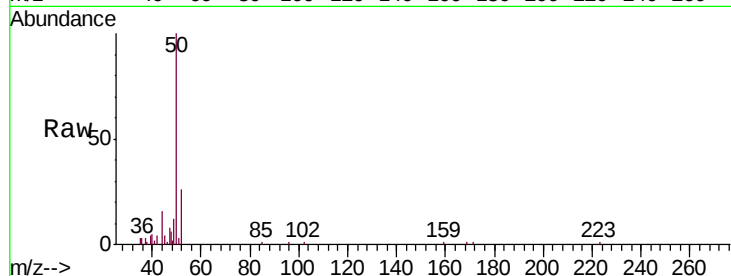
CR-103-BRW

Tgt Ion: 50 Resp: 29700

Ion Ratio Lower Upper

50 100

52 25.5 25.0 37.4



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

25000

20000

15000

10000

5000

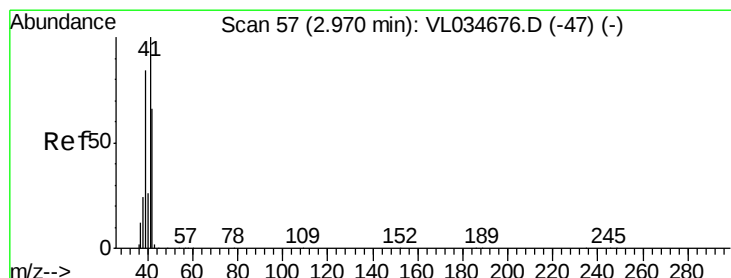
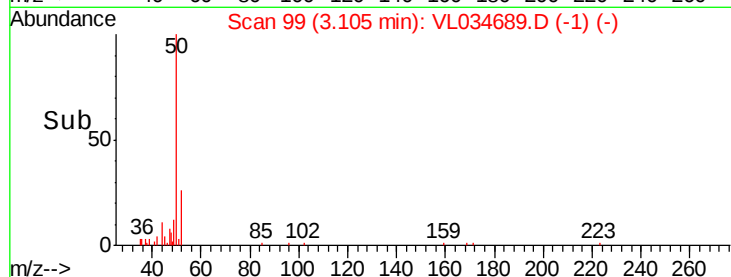
0

Time-->

3.05

3.10

3.15



#9

Propene

Concen: 2.759 ppbv

RT: 3.17 min Scan# 119

Delta R.T. 0.20 min

Lab File: VL034689.D

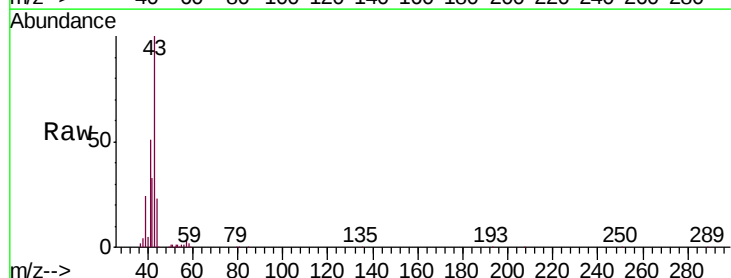
Acq: 26 Feb 2020 15:39

Tgt Ion: 41 Resp: 113805

Ion Ratio Lower Upper

41 100

42 63.3 54.9 82.3



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

100000

80000

60000

40000

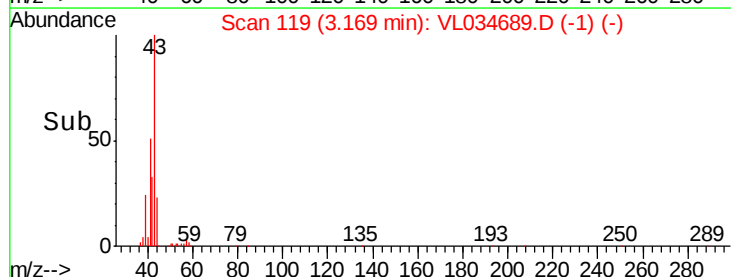
20000

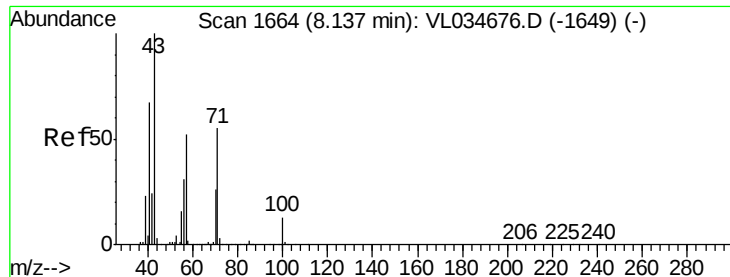
0

Time-->

3.15

3.20

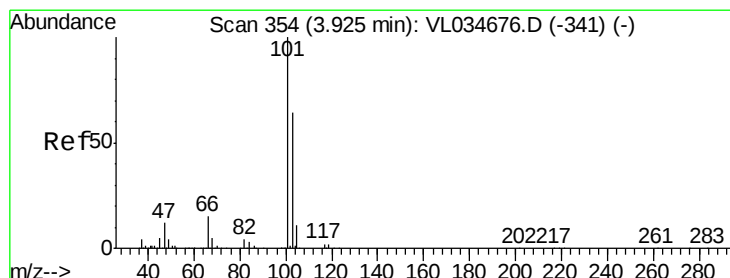
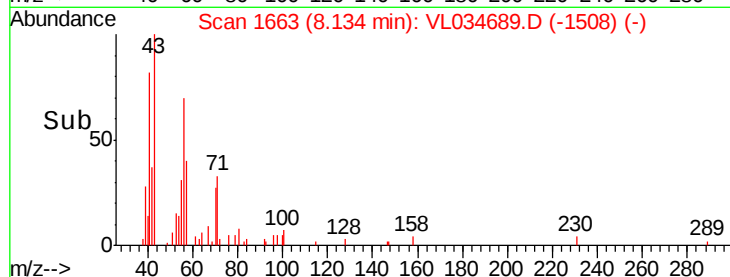
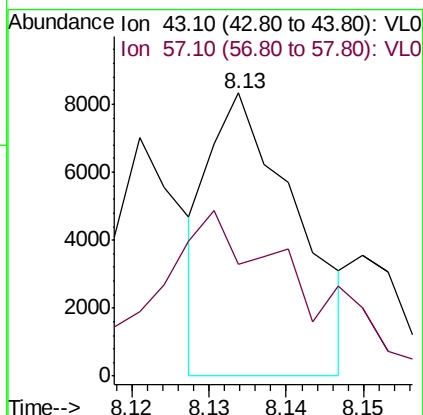
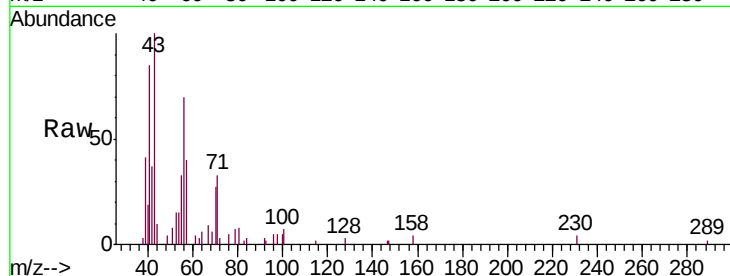




#10
Heptane
Concen: 0.062 ppbv
RT: 8.13 min Scan# 1663
Delta R.T. -0.00 min
Lab File: VL034689.D
Acq: 26 Feb 2020 15:39

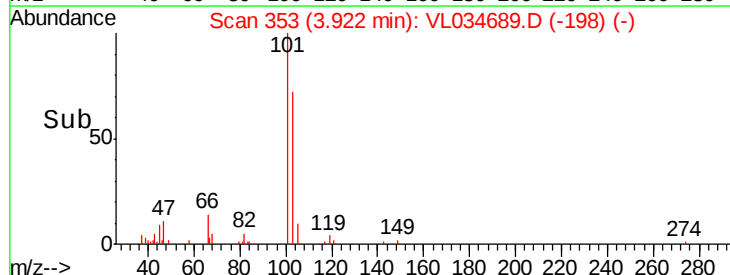
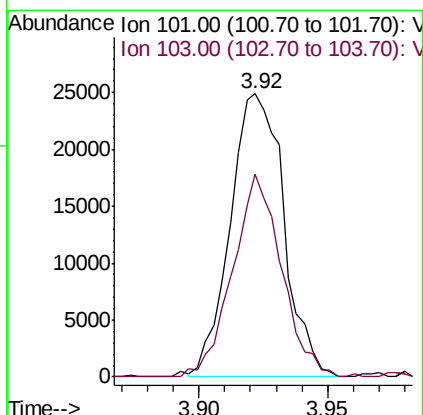
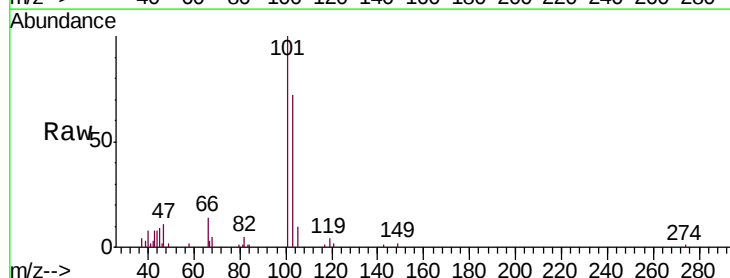
Instrument :
MSVOA_L
ClientSampleId :
CR-103-BRW

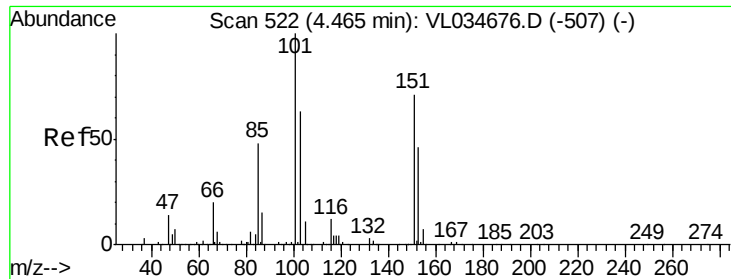
Tgt Ion: 43 Resp: 6530
Ion Ratio Lower Upper
43 100
57 118.6 41.0 61.6#



#11
Trichlorofluoromethane
Concen: 0.286 ppbv
RT: 3.92 min Scan# 353
Delta R.T. -0.00 min
Lab File: VL034689.D
Acq: 26 Feb 2020 15:39

Tgt Ion: 101 Resp: 36070
Ion Ratio Lower Upper
101 100
103 71.7 51.2 76.8





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.059 ppbv

RT: 4.46 min Scan# 521

Delta R.T. -0.00 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

Instrument :

MSVOA_L

ClientSampleId :

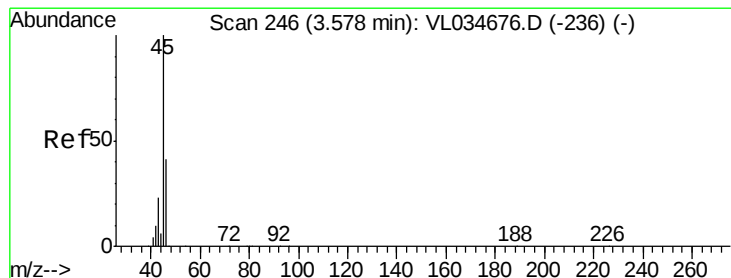
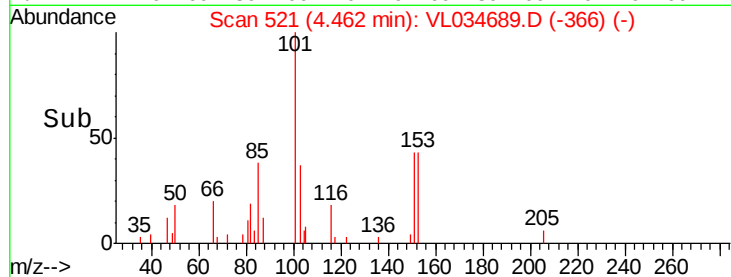
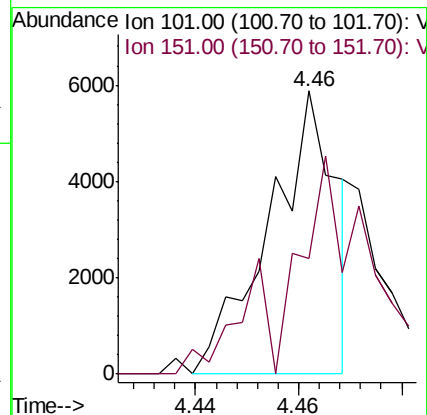
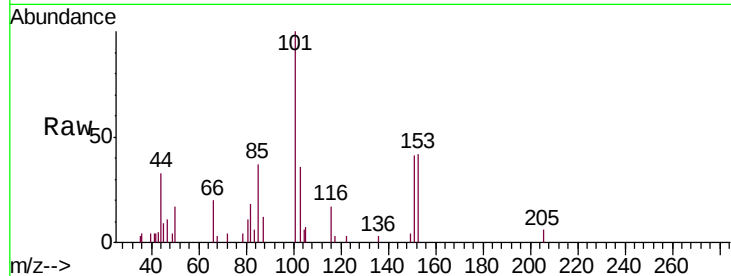
CR-103-BRW

Tgt Ion: 101 Resp: 5276

Ion Ratio Lower Upper

101 100

151 91.4 55.8 83.6#



#13

Ethanol

Concen: 46.498 ppbv

RT: 3.57 min Scan# 244

Delta R.T. -0.01 min

Lab File: VL034689.D

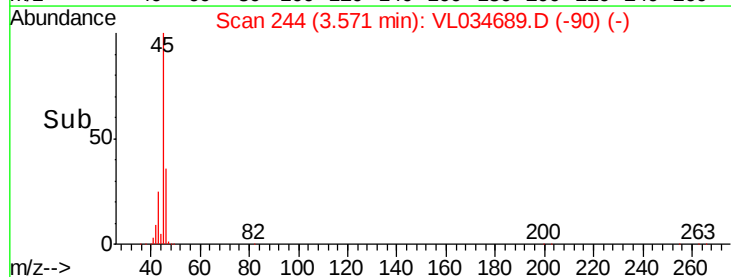
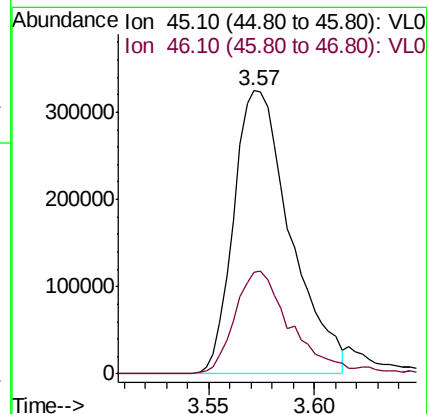
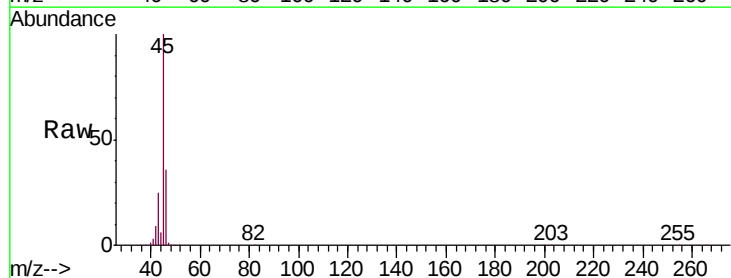
Acq: 26 Feb 2020 15:39

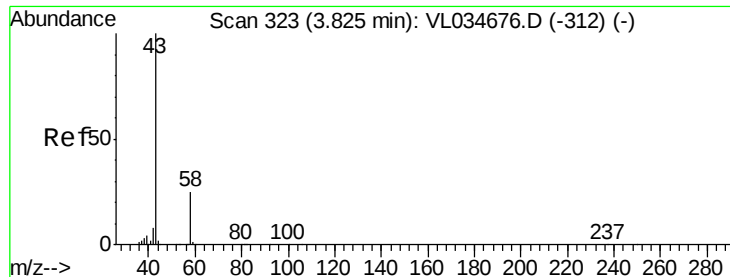
Tgt Ion: 45 Resp: 605857

Ion Ratio Lower Upper

45 100

46 36.9 15.4 61.4





#15

Acetone

Concen: 5.182 ppbv

RT: 3.82 min Scan# 322

Delta R.T. -0.00 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

Instrument :

MSVOA_L

ClientSampleId :

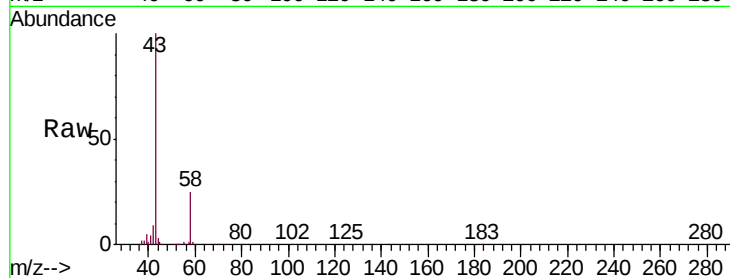
CR-103-BRW

Tgt Ion: 43 Resp: 539843

Ion Ratio Lower Upper

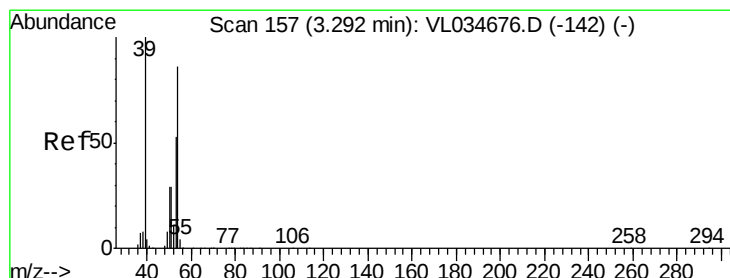
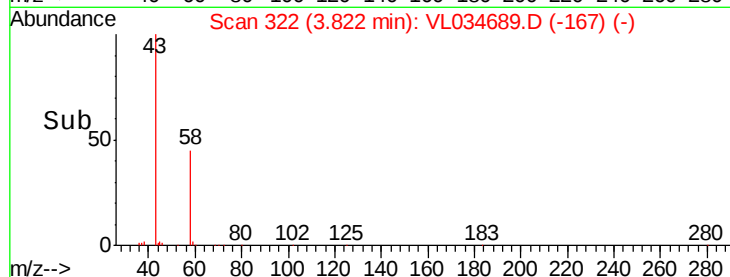
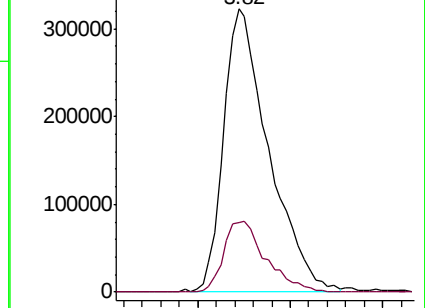
43 100

58 23.8 21.4 32.0



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.301 ppbv

RT: 3.27 min Scan# 151

Delta R.T. -0.02 min

Lab File: VL034689.D

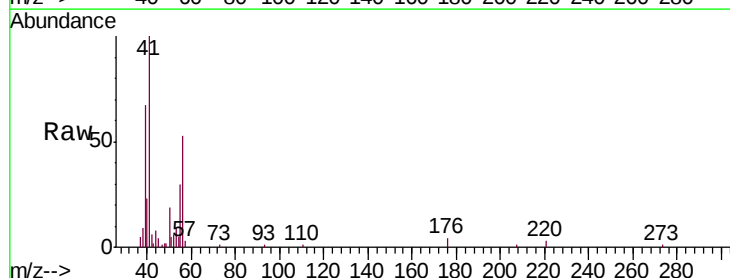
Acq: 26 Feb 2020 15:39

Tgt Ion: 39 Resp: 14495

Ion Ratio Lower Upper

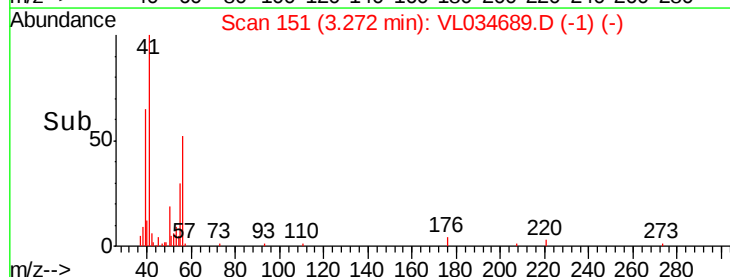
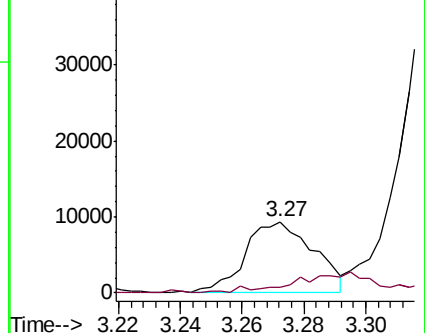
39 100

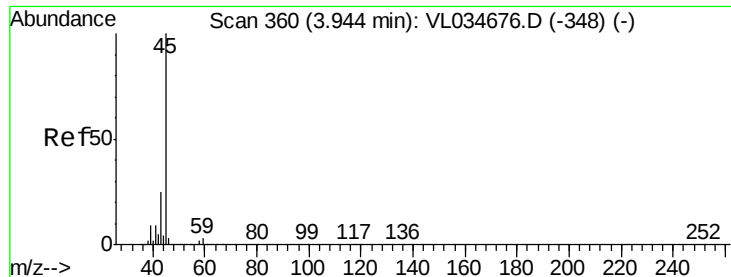
54 41.7 67.0 100.6#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#19

Isopropyl Alcohol

Concen: 0.942 ppbv

RT: 3.95 min Scan# 361

Delta R.T. 0.00 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

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MSVOA_L

ClientSampleId :

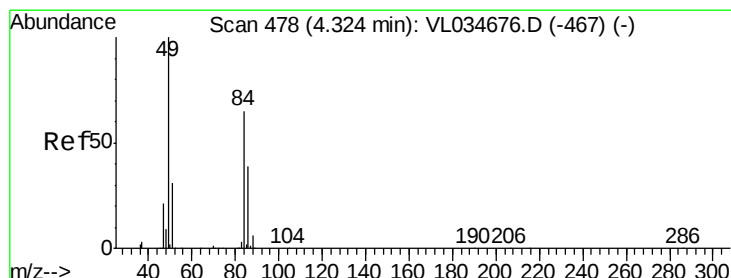
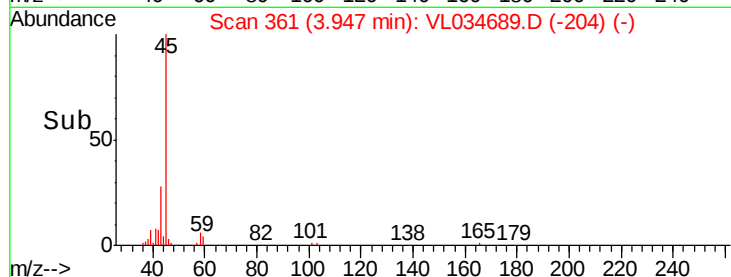
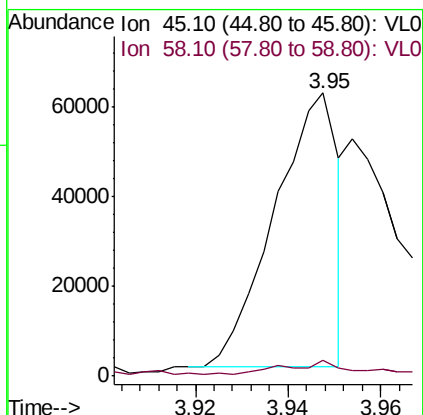
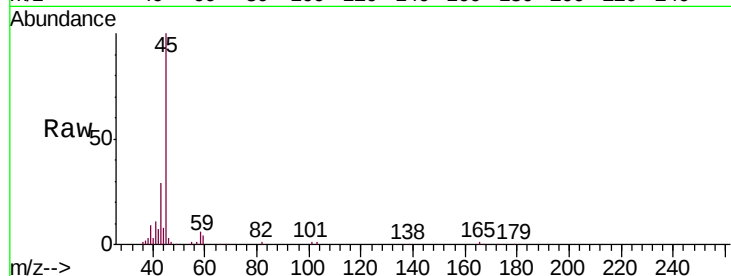
CR-103-BRW

Tgt Ion: 45 Resp: 58447

Ion Ratio Lower Upper

45 100

58 11.5 1.8 2.6#



#20

Methylene Chloride

Concen: 1.633 ppbv

RT: 4.32 min Scan# 478

Delta R.T. 0.00 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

Tgt Ion: 84 Resp: 63286

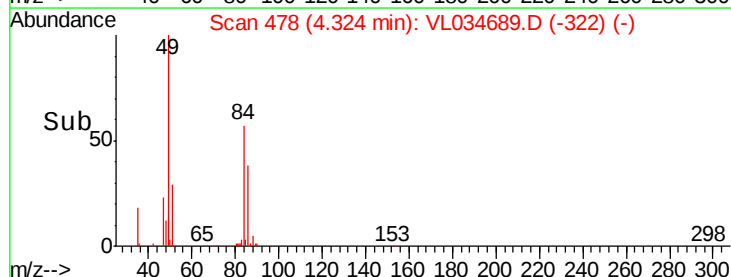
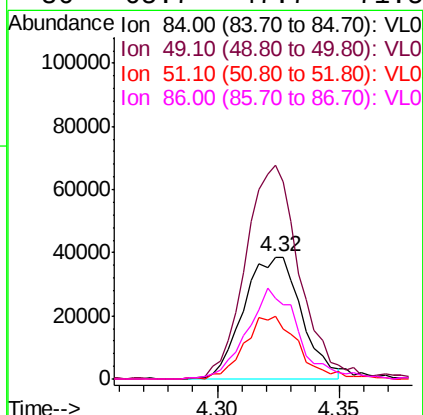
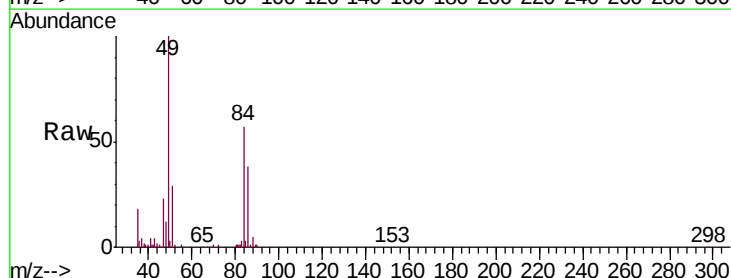
Ion Ratio Lower Upper

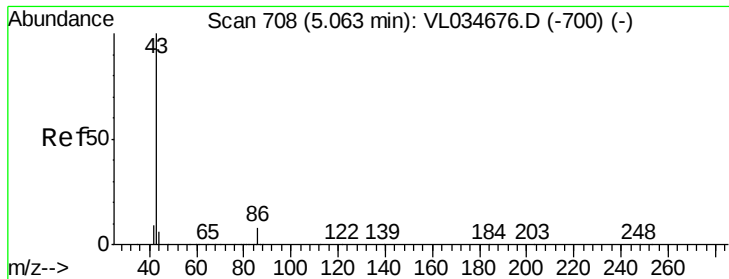
84 100

49 174.2 122.8 184.2

51 50.1 38.6 58.0

86 65.7 47.7 71.5





#23

Vinyl Acetate

Concen: 0.024 ppbv

RT: 5.06 min Scan# 706

Delta R.T. -0.01 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

Instrument :

MSVOA_L

ClientSampleId :

CR-103-BRW

Tgt Ion: 43 Resp: 3436

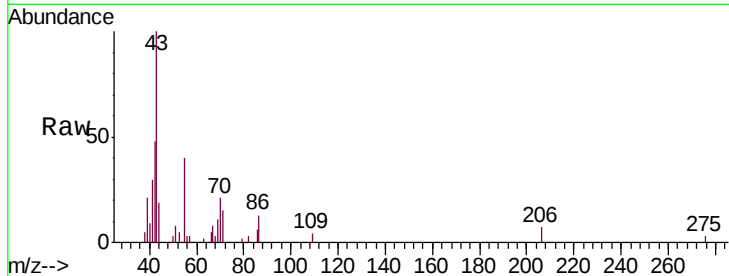
Ion Ratio Lower Upper

43 100

86 16.7 6.0 9.0#

42 81.9 8.0 12.0#

44 7.0 4.5 6.7#

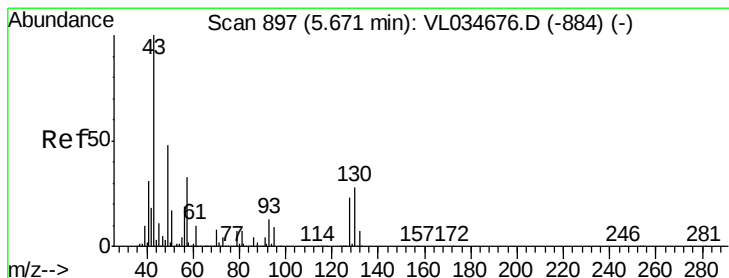
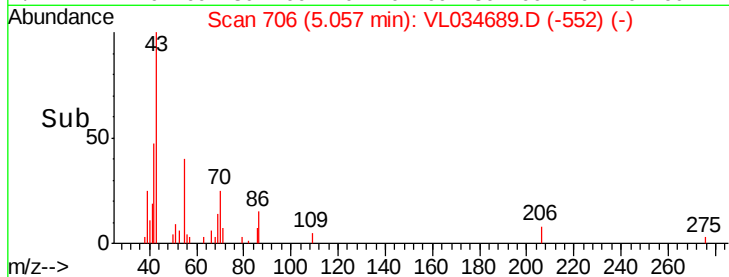
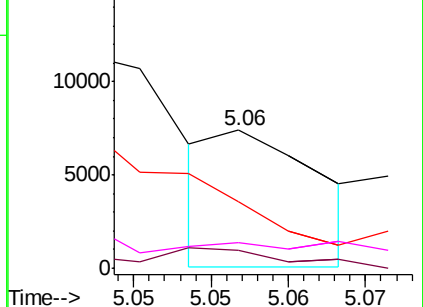


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.704 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.01 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

Tgt Ion: 43 Resp: 129770

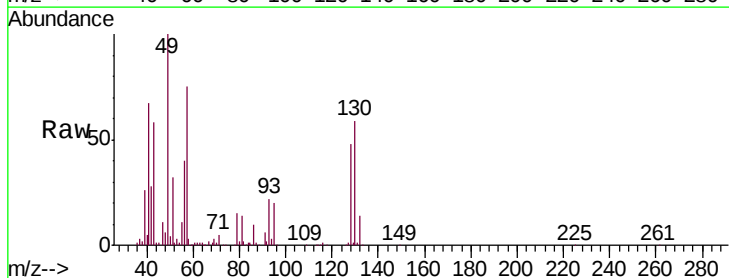
Ion Ratio Lower Upper

43 100

45 2.5 8.2 12.4#

61 1.8 7.8 11.6#

70 2.8 6.1 9.1#

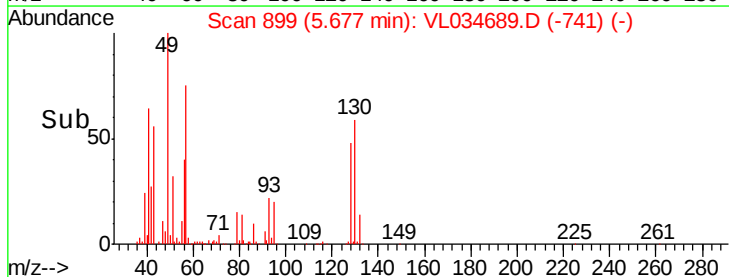
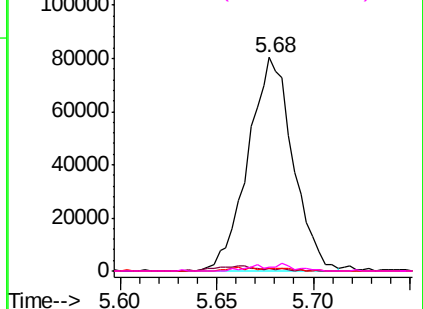


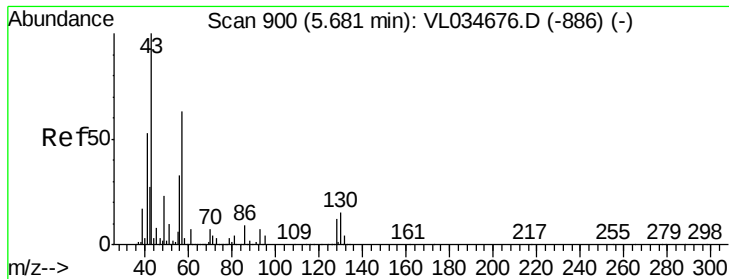
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

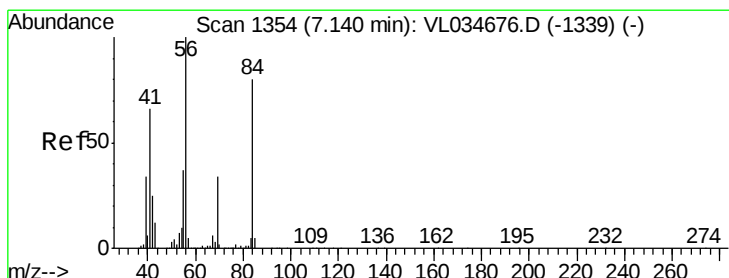
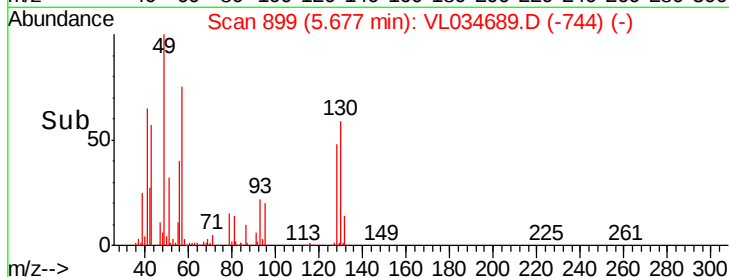
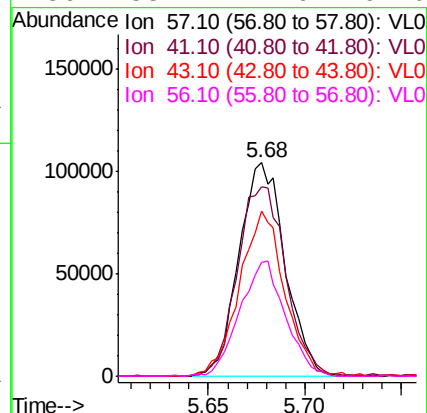
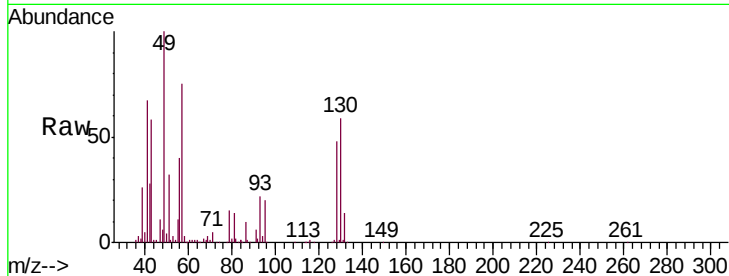




#26
Hexane
Concen: 2.027 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.00 min
Lab File: VL034689.D
Acq: 26 Feb 2020 15:39

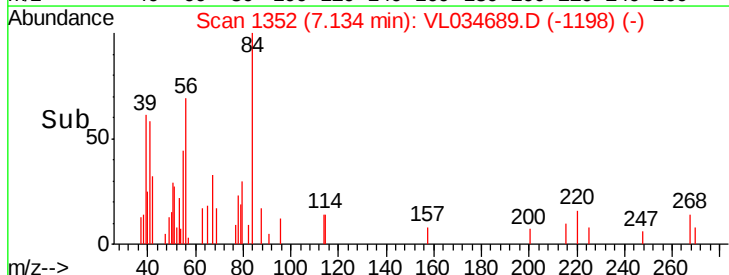
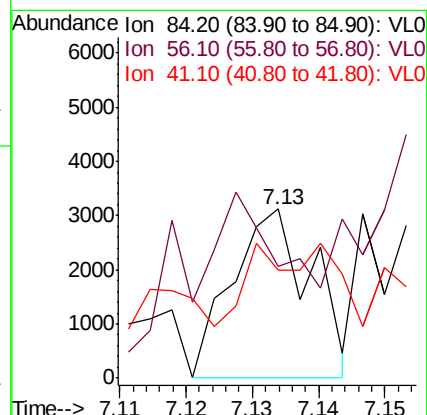
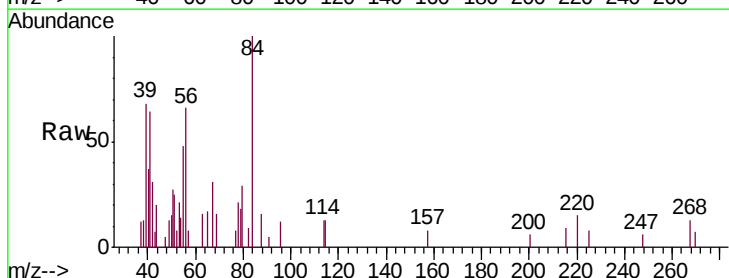
Instrument :
MSVOA_L
ClientSampleId :
CR-103-BRW

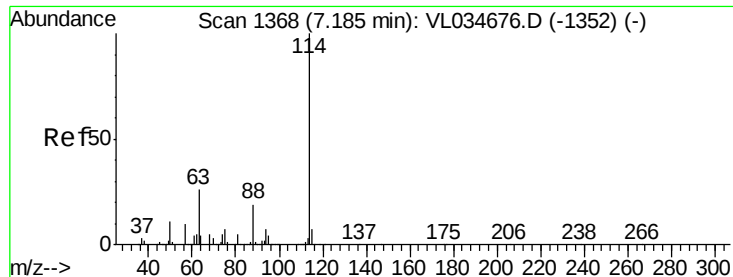
Tgt Ion:	57	Resp:	172319
Ion	Ratio	Lower	Upper
57	100		
41	94.4	70.3	105.5
43	76.2	177.0	265.4#
56	53.4	42.6	64.0



#30
Cyclohexane
Concen: 0.039 ppbv
RT: 7.13 min Scan# 1352
Delta R.T. -0.01 min
Lab File: VL034689.D
Acq: 26 Feb 2020 15:39

Tgt Ion:	84	Resp:	2602
Ion	Ratio	Lower	Upper
84	100		
56	149.9	113.4	170.2
41	223.7	68.2	102.4#

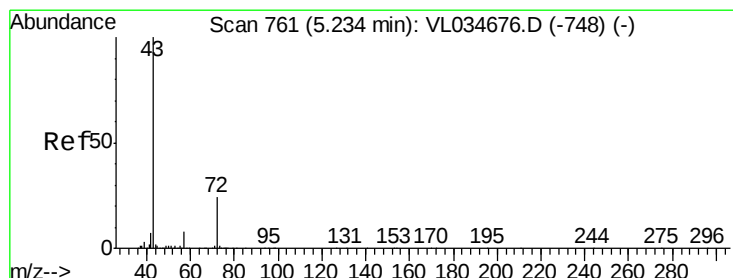
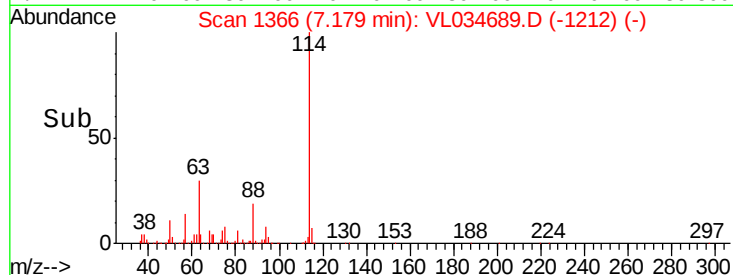
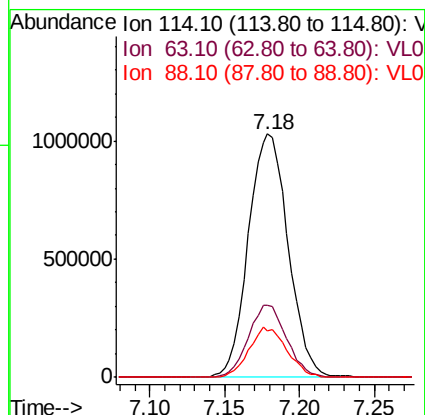
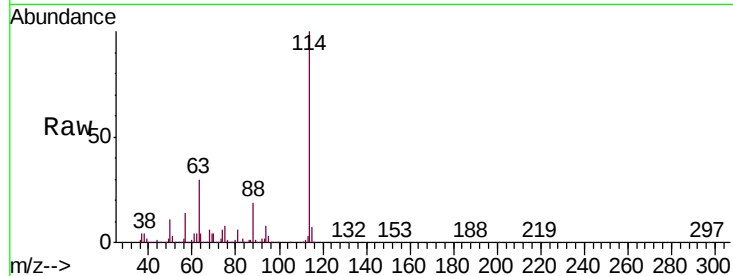




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.18 min Scan# 1366
 Delta R.T. -0.01 min
 Lab File: VL034689.D
 Acq: 26 Feb 2020 15:39

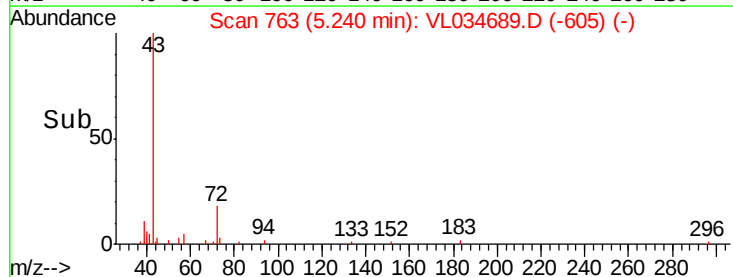
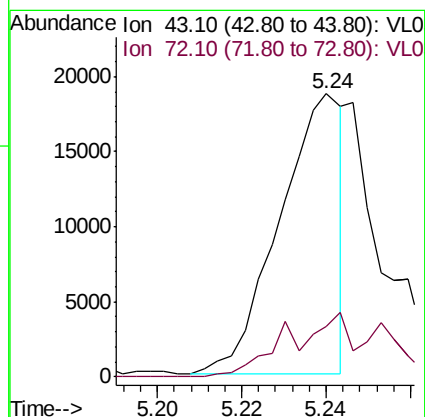
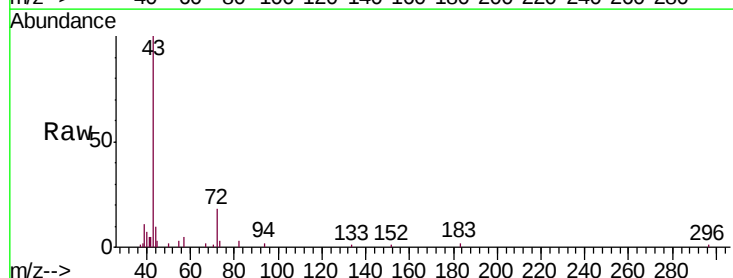
Instrument :
 MSVOA_L
 ClientSampleId :
 CR-103-BRW

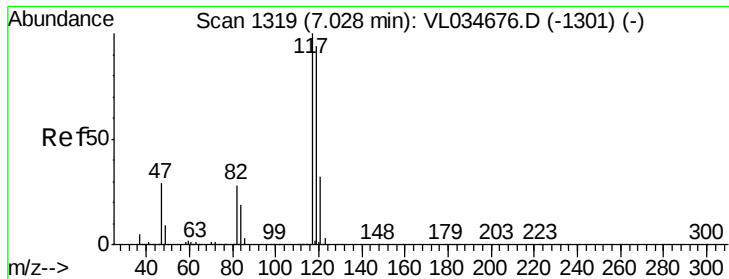
Tgt Ion:114 Resp: 1905845
 Ion Ratio Lower Upper
 114 100
 63 28.6 22.9 34.3
 88 19.7 15.8 23.6



#34
 2-Butanone
 Concen: 0.162 ppbv
 RT: 5.24 min Scan# 763
 Delta R.T. 0.01 min
 Lab File: VL034689.D
 Acq: 26 Feb 2020 15:39

Tgt Ion: 43 Resp: 19375
 Ion Ratio Lower Upper
 43 100
 72 0.0 18.2 27.2#





#35

Carbon Tetrachloride

Concen: 0.031 ppbv

RT: 7.02 min Scan# 1318

Delta R.T. -0.00 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

Instrument :

MSVOA_L

ClientSampleId :

CR-103-BRW

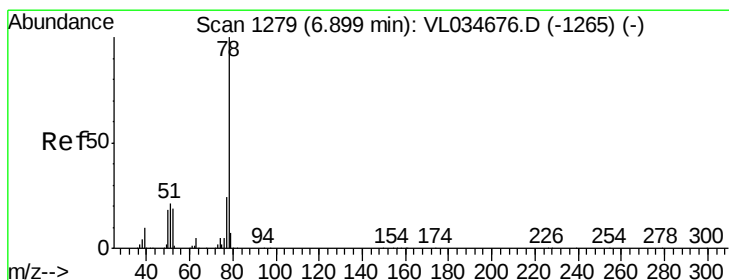
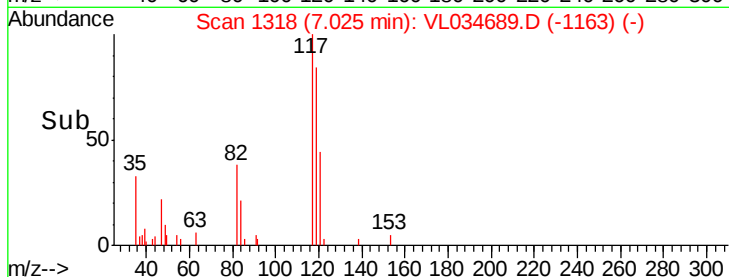
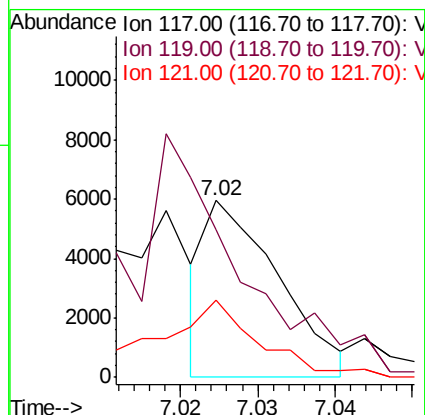
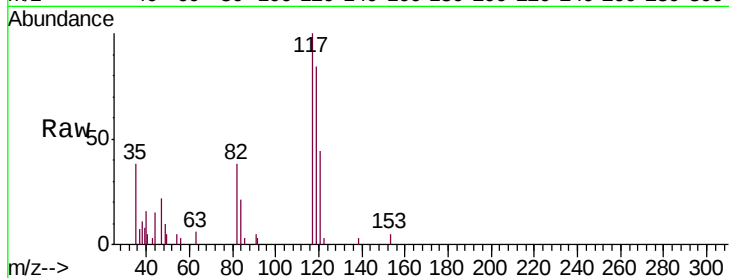
Tgt Ion: 117 Resp: 3914

Ion Ratio Lower Upper

117 100

119 76.6 75.5 113.3

121 46.5 25.4 38.0#



#36

Benzene

Concen: 0.393 ppbv

RT: 6.89 min Scan# 1277

Delta R.T. -0.01 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

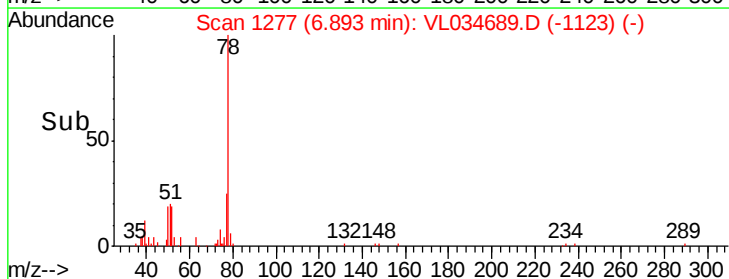
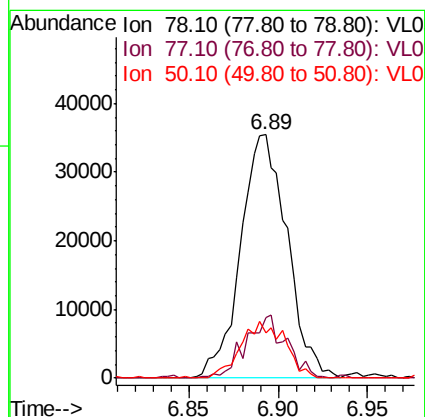
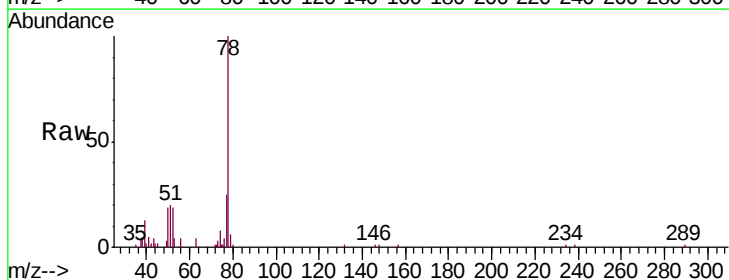
Tgt Ion: 78 Resp: 64657

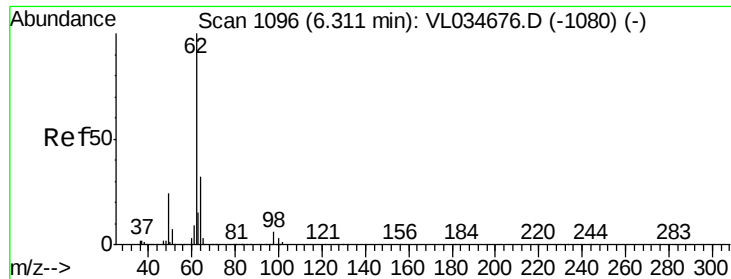
Ion Ratio Lower Upper

78 100

77 24.7 19.5 29.3

50 18.5 14.6 21.8

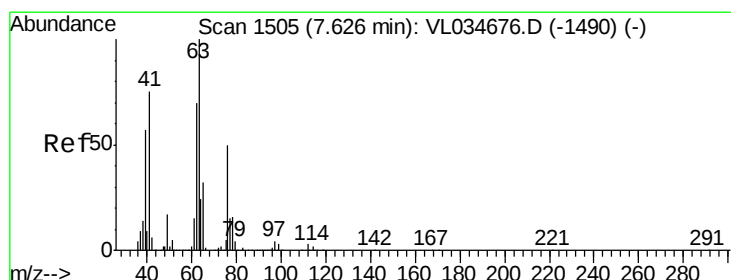
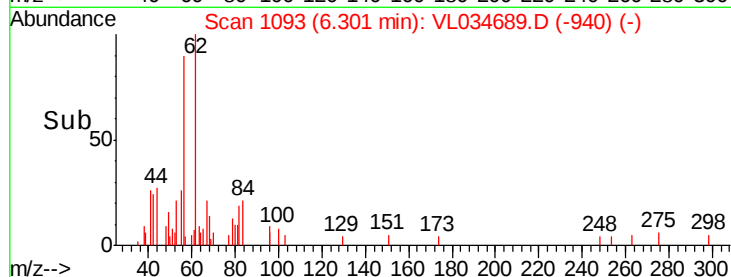
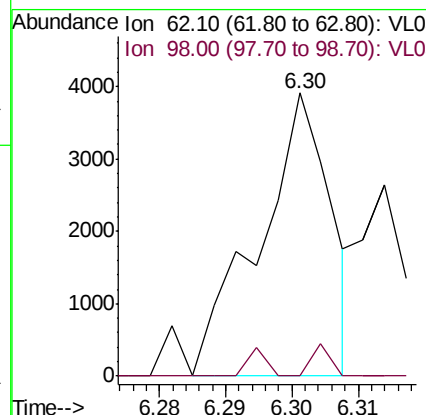
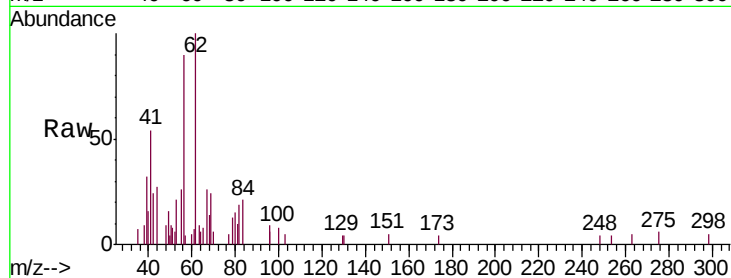




#37
 1,2-Dichloroethane
 Concen: 0.028 ppbv
 RT: 6.30 min Scan# 1093
 Delta R.T. -0.01 min
 Lab File: VL034689.D
 Acq: 26 Feb 2020 15:39

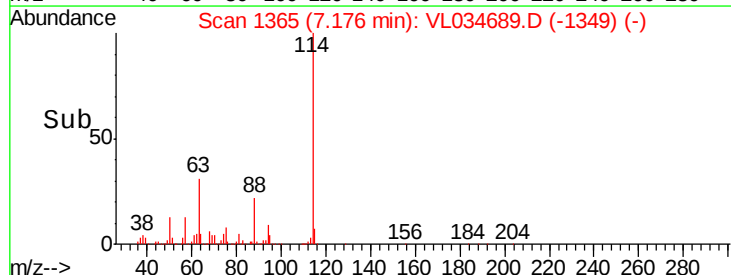
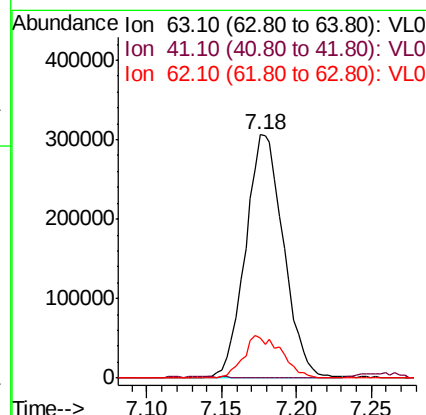
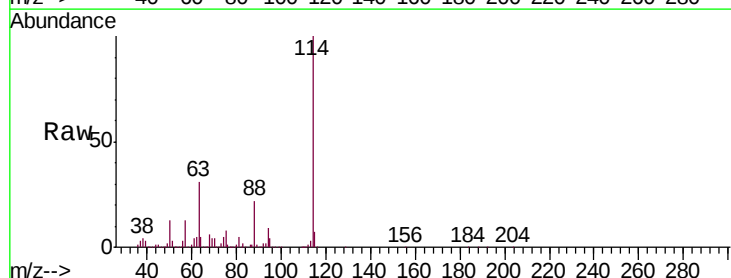
Instrument :
 MSVOA_L
 ClientSampleId :
 CR-103-BRW

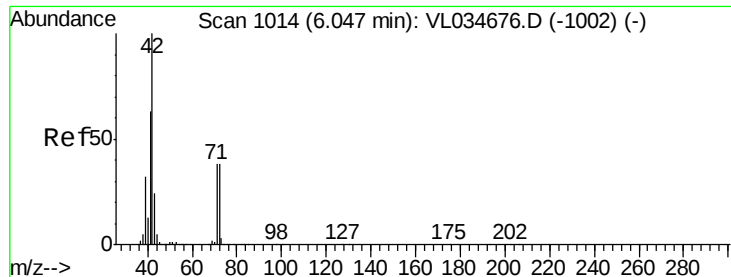
Tgt Ion: 62 Resp: 2954
 Ion Ratio Lower Upper
 62 100
 98 0.0 4.7 7.1#



#39
 1,2-Dichloropropane
 Concen: 8.268 ppbv
 RT: 7.18 min Scan# 1365
 Delta R.T. -0.45 min
 Lab File: VL034689.D
 Acq: 26 Feb 2020 15:39

Tgt Ion: 63 Resp: 541480
 Ion Ratio Lower Upper
 63 100
 41 0.0 60.2 90.4#
 62 16.5 56.3 84.5#





#41

Tetrahydrofuran

Concen: 0.028 ppbv

RT: 6.05 min Scan# 1014

Delta R.T. 0.00 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

Instrument :

MSVOA_L

ClientSampleId :

CR-103-BRW

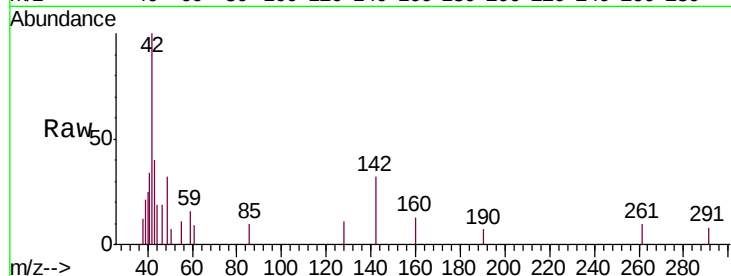
Tgt Ion: 42 Resp: 1750

Ion Ratio Lower Upper

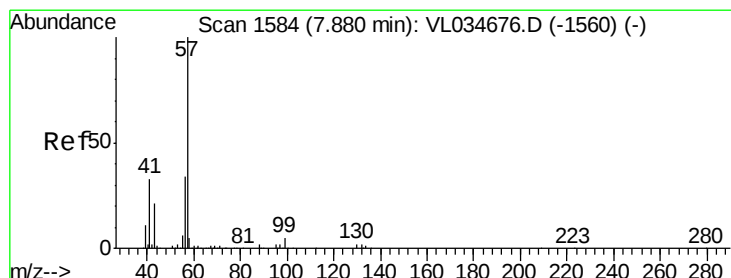
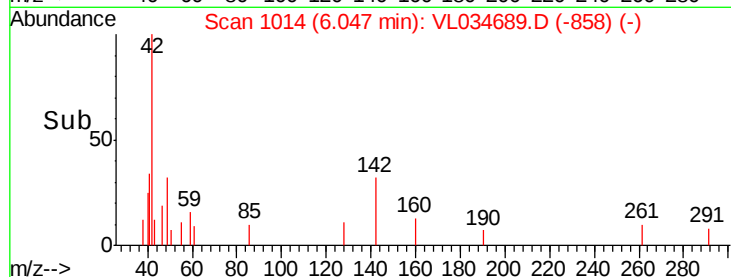
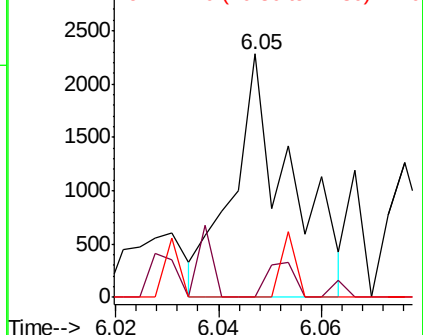
42 100

72 0.0 31.7 47.5#

71 0.0 30.7 46.1#



Abundance Ion 42.10 (41.80 to 42.80): VL0
Ion 72.10 (71.80 to 72.80): VL0
Ion 71.10 (70.80 to 71.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.066 ppbv

RT: 7.88 min Scan# 1583

Delta R.T. -0.00 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

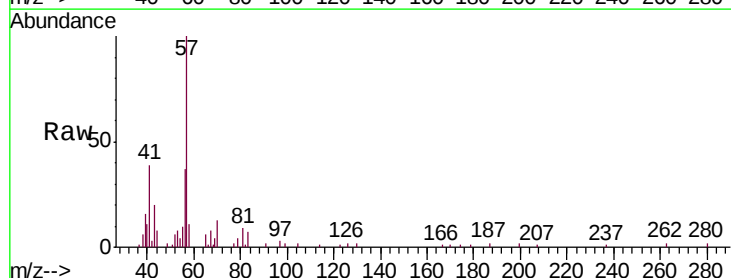
Tgt Ion: 57 Resp: 19055

Ion Ratio Lower Upper

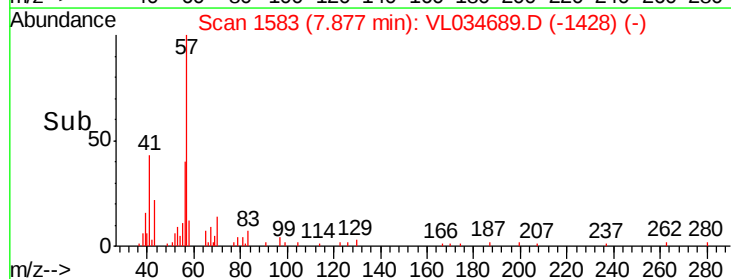
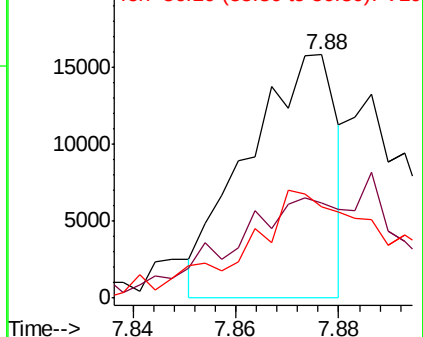
57 100

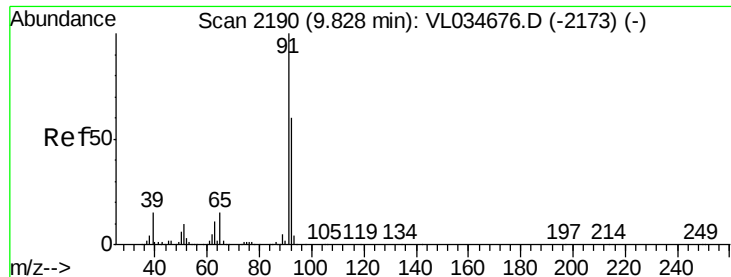
41 0.0 26.0 39.0#

56 71.7 25.6 38.4#



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





#53

Toluene

Concen: 4.364 ppbv

RT: 9.82 min Scan# 2188

Delta R.T. -0.01 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

Instrument :

MSVOA_L

ClientSampleId :

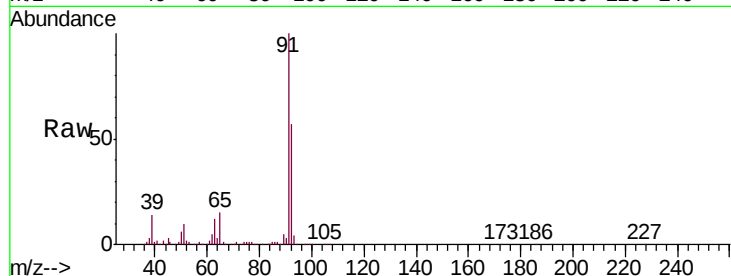
CR-103-BRW

Tgt Ion: 91 Resp: 764008

Ion Ratio Lower Upper

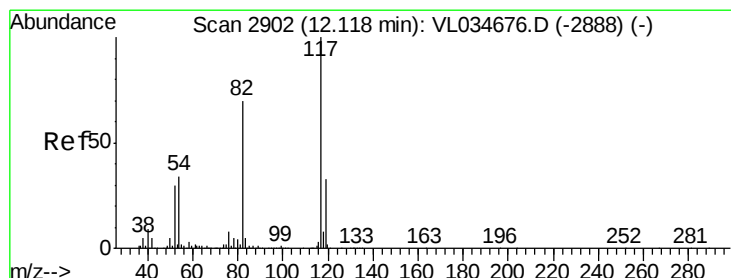
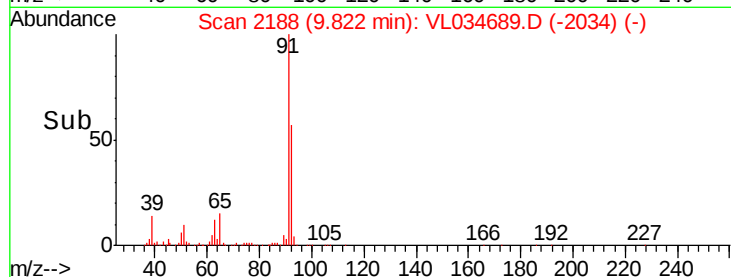
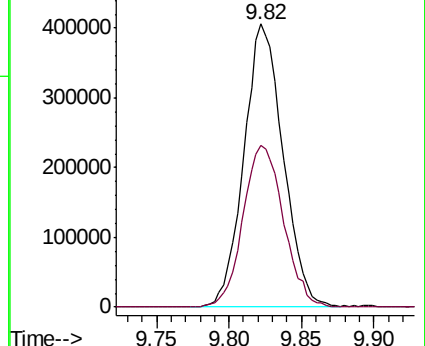
91 100

92 59.3 48.5 72.7



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: 12.11 min Scan# 2900

Delta R.T. -0.01 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

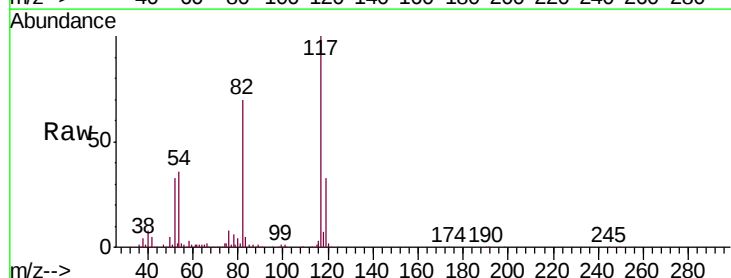
Tgt Ion: 117 Resp: 1848128

Ion Ratio Lower Upper

117 100

82 70.9 54.1 81.1

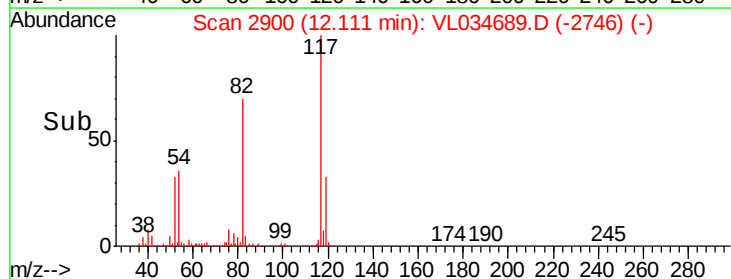
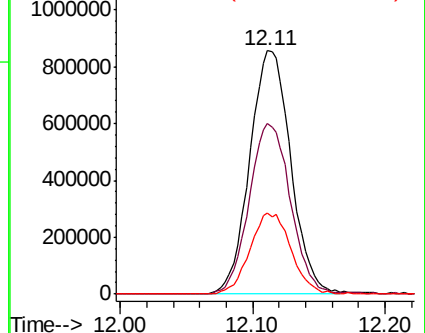
119 33.6 27.6 41.4

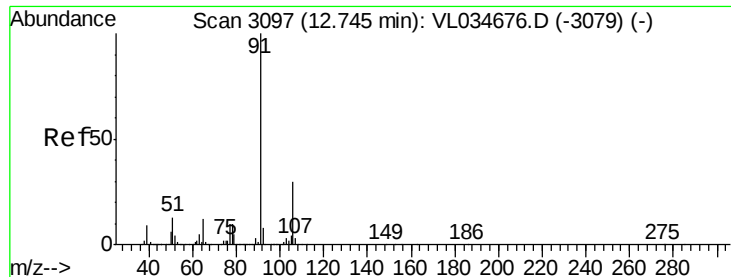


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 0.023 ppbv

RT: 12.75 min Scan# 3098

Delta R.T. 0.00 min

Lab File: VL034689.D

Acq: 26 Feb 2020 15:39

Instrument :

MSVOA_L

ClientSampleId :

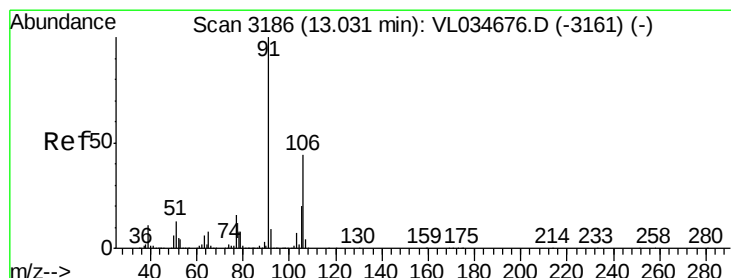
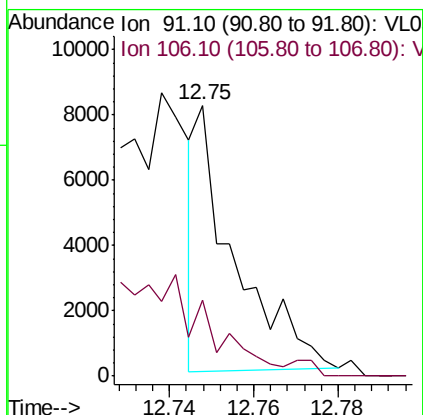
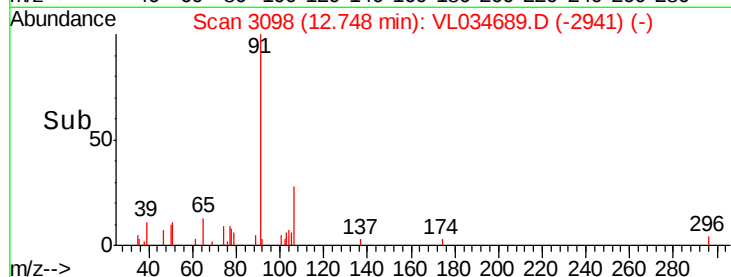
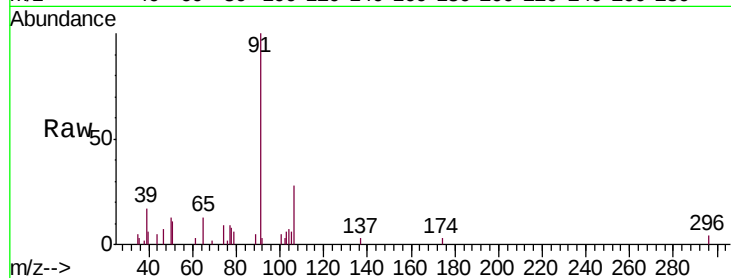
CR-103-BRW

Tgt Ion: 91 Resp: 5033

Ion Ratio Lower Upper

91 100

106 27.9 24.0 36.0



#59

m/p-Xylene

Concen: 0.031 ppbv

RT: 13.02 min Scan# 3183

Delta R.T. -0.01 min

Lab File: VL034689.D

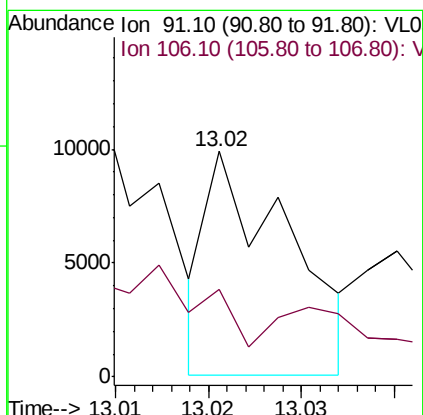
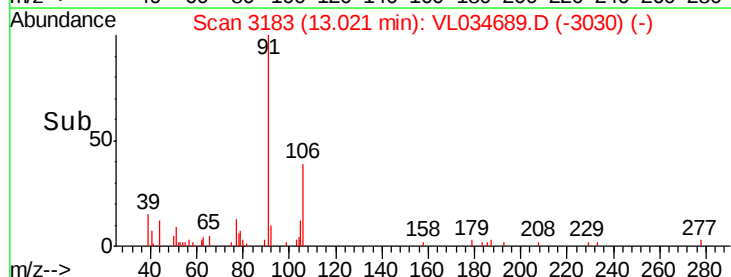
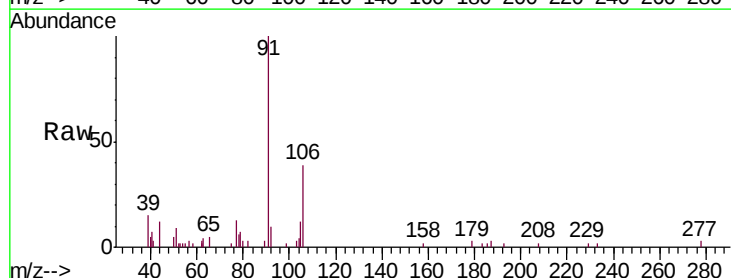
Acq: 26 Feb 2020 15:39

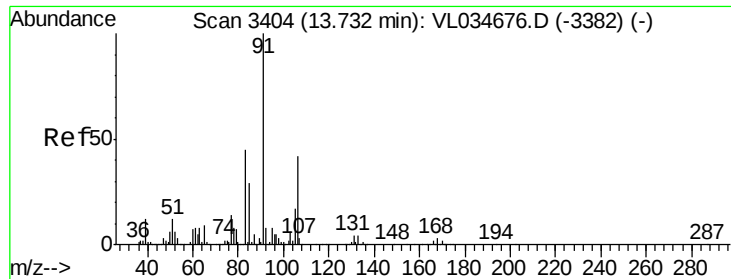
Tgt Ion: 91 Resp: 6077

Ion Ratio Lower Upper

91 100

106 0.0 35.6 53.4#

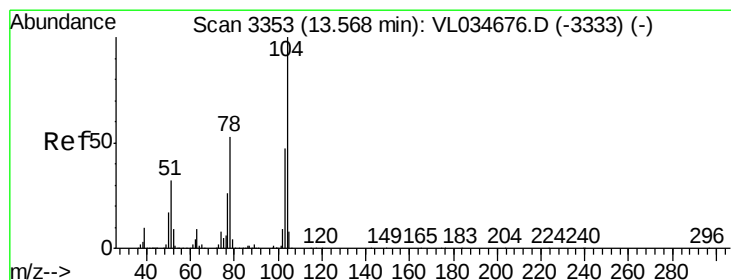
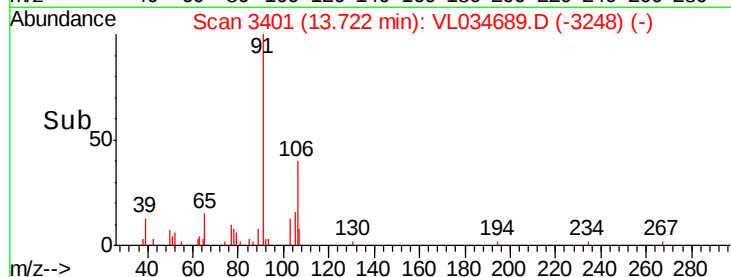
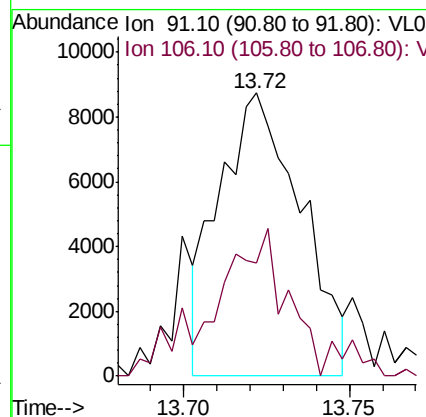
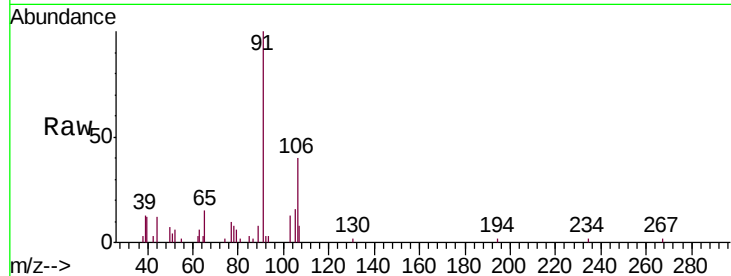




#60
o-Xylene
Concen: 0.077 ppbv
RT: 13.72 min Scan# 3401
Delta R.T. -0.01 min
Lab File: VL034689.D
Acq: 26 Feb 2020 15:39

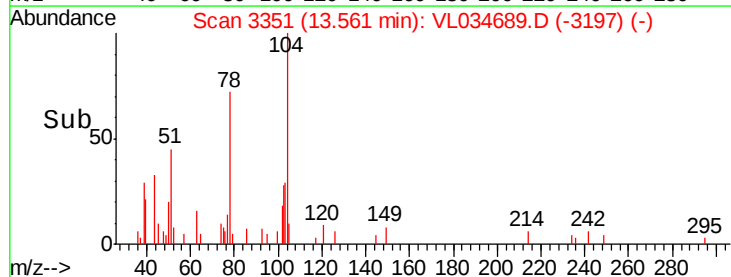
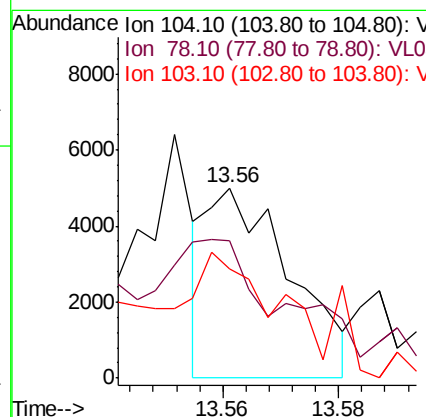
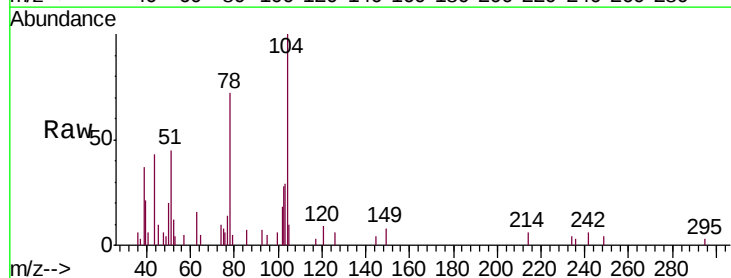
Instrument :
MSVOA_L
ClientSampleId :
CR-103-BRW

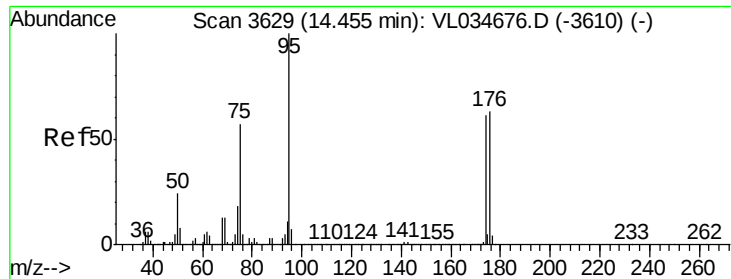
Tgt Ion: 91 Resp: 14966
Ion Ratio Lower Upper
91 100
106 51.1 21.9 65.5



#61
Styrene
Concen: 0.040 ppbv
RT: 13.56 min Scan# 3351
Delta R.T. -0.01 min
Lab File: VL034689.D
Acq: 26 Feb 2020 15:39

Tgt Ion: 104 Resp: 4999
Ion Ratio Lower Upper
104 100
78 162.3 44.2 66.4#
103 119.8 37.4 56.0#

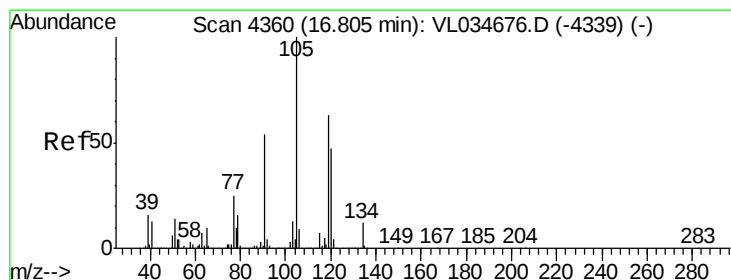
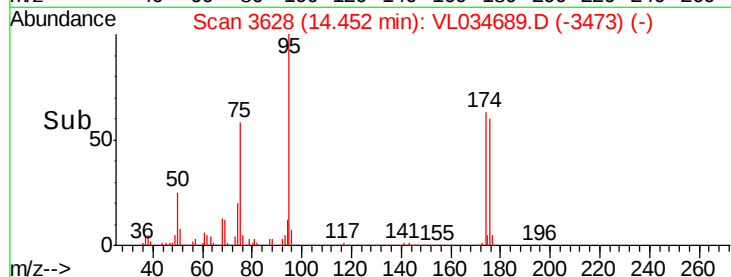
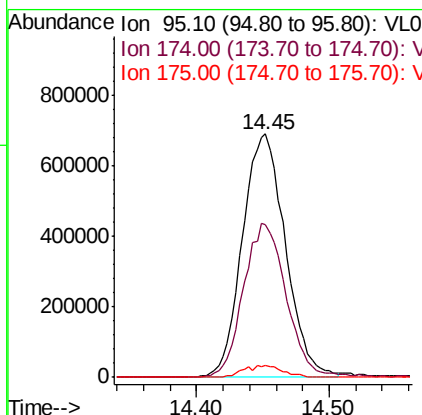
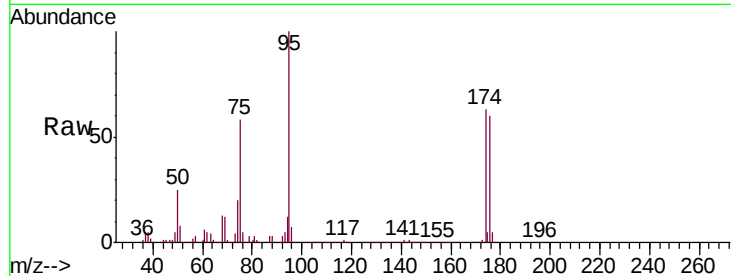




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.278 ppbv
 RT: 14.45 min Scan# 3628
 Delta R.T. -0.00 min
 Lab File: VL034689.D
 Acq: 26 Feb 2020 15:39

Instrument :
 MSVOA_L
 ClientSampleId :
 CR-103-BRW

Tgt Ion: 95 Resp: 1557498
 Ion Ratio Lower Upper
 95 100
 174 63.5 50.7 76.1
 175 4.8 3.9 5.9



#74
 1,2,4-Trimethylbenzene
 Concen: 0.055 ppbv
 RT: 16.79 min Scan# 4356
 Delta R.T. -0.01 min
 Lab File: VL034689.D
 Acq: 26 Feb 2020 15:39

Tgt Ion: 105 Resp: 12478
 Ion Ratio Lower Upper
 105 100
 120 40.0 37.9 56.9
 91 13.6 43.9 65.9#
 77 9.1 20.3 30.5#

