Table 1. Quality criteria for the target 106 target VOCs.

	Compound[a]	Precision[b] (RSD%)	MDL (ppbv)	Precision of RF[c] (RSD%)
	Alkane			
1	ethane*	1.4	0.043	4.3
3	propane*	1.1	0.035	3.2
5	isobutane*	1.2	0.027	5.1
7	*n*-butane*	1.2	0.030	1.7
13	isopentane	0.3	0.007	3.3
15	*n*-pentane	1.2	0.007	3.3
20	2,2-dimethylbutane	1.4	0.007	1.7
23	cyclopentane	0.6	0.009	4.2
24	2-methylpentane	0.3	0.010	4.2
25	3-methylpentane	0.7	0.005	2.9
27	*n*-hexane	0.5	0.006	4.9
30	methylcyclopentane	0.4	0.003	2.4
31	2,4-dimethylpentane	1.0	0.003	5.1
33	cyclohexane	1.0	0.003	6.5
34	2-methylhexane	0.6	0.007	5.4
35	2,3-dimethylpentane	1.0	0.005	1.3
36	3-methylhexane	0.5	0.004	5.2
37	2,2,4-trimethylpentane	1.0	0.002	2.4
38	*n*-heptane	1.0	0.007	2.6
39	methylcyclohexane	0.6	0.002	6.0
40	2,3,4-trimethylpentane	0.8	0.003	1.2
42	2-methylheptane	0.3	0.008	4.1
43	3-methylheptane	1.2	0.005	3.4
44	*n*-octane	1.0	0.004	6.6
50	*n*-nonane	1.3	0.005	3.4
60	*n*-decane	1.5	0.005	4.1
65	*n*-undecane	2.4	0.008	8.9
	Alkenes			
2	ethene*	1.1	0.042	7.8
4	propene*	0.9	0.030	3.6
8	*trans*-2-butene*	1.1	0.027	2.1
9	1-butene*	1.6	0.023	3.1
10	isobutene*	1.6	0.026	2.9
11	*cis*-2-butene*	0.5	0.020	3.3
12	3-methyl-1-butene	0.8	0.006	3.6
14	1-pentene	1.0	0.010	2.9
16	isoprene	0.5	0.003	2.2
17	*trans*-2-pentene	0.9	0.005	2.1
18	*cis*-2-pentene	0.6	0.005	2.8
19	2-methyl-2-butene	1.5	0.005	1.4
21	cyclopentene	0.9	0.002	6.9

22	4-methyl-1-pentene	1.1	0.015	5.3
26	2-methyl-1-pentene	1.0	0.008	5.7
28	*trans*-2-hexene	0.9	0.005	7.6
29	*cis*-2-hexene	0.8	0.005	3.2
52	α-pinene	0.4	0.002	5.3
55	β-pinene	0.7	0.002	2.5
70	1,3-butadiene	0.8	0.006	8.6
	Alkyne			
6	ethyne*	0.4	0.060	3.4
	Aromatics			
32	benzene	0.8	0.002	4.8
41	toluene	0.8	0.001	3.0
48	styrene	0.9	0.003	4.9
45	ethylbenzene	0.7	0.002	2.1
46,4	*m,p*-xylene	0.5	0.003	1.9
49	*o*-xylene	0.5	0.002	1.9
51	isopropylbenzene	0.6	0.002	3.5
53	*n*-propylbenzene	1.3	0.002	4.2
54	*m*-ethyltoluene	1.0	0.002	4.5
56	*p*-ethyltoluene	0.8	0.002	5.6
57	1,3,5-trimethylbenzene	1.8	0.002	4.8
58	*o*-ethyltoluene	1.5	0.002	2.9
59	1,2,4-trimethylbenzene	1.3	0.001	3.0
61	1,2,3-trimethylbenzene	1.4	0.002	5.1
62	*m*-diethylbenzene	1.5	0.008	8.7
63	*p*-diethylbenzene	2.3	0.007	8.0
64	*o*-diethylbenzene	2.4	0.007	6.2
	Halogenated			
66	dichlorodifluoromethane	1.6	0.002	2.5
67	chloromethane	2.1	0.017	6.3
68	dichlorotetrafluoroethane	1.2	0.001	3.6
69	vinyl chloride	1.2	0.004	1.6
72	chloroethane	1.7	0.012	9.3
73	trichlorofluoromethane	1.3	0.001	1.9
74	1,1-dichloroethene	2.0	0.003	3.6
75	methylene chloride	1.4	0.007	7.7
77	trichlorotrifluoroethane	1.5	0.010	2.6
78	trans-1,2-dichloroethene	1.4	0.007	8.4
79	1,1-dichloroethane	0.3	0.003	3.9
83	cis-1,2-dichloroethene	0.7	0.004	3.5
84	chloroform	0.6	0.003	1.2
87	1,2-dichloroethane	0.3	0.001	2.7
88	1,1,1-trichloroethane	0.6	0.001	2.7
89	tetrachlorocarbon	0.6	0.002	2.0
90	1,2-dichloropropane	0.7	0.005	1.7
92	trichloroethene	1.7	0.002	1.9

93	cis-1,3-dichloropropene	1.1	0.002	3.9
95	trans-1,3-dichloropropene	1.2	0.002	1.9
96	1,1,2-Trichloroethane	0.9	0.002	2.7
100	tetrachloroethene	0.9	0.002	4.5
101	chlorobenzene	1.1	0.003	3.4
103	benzyl chloride	1.7	0.005	2.3
104	1,3-dichlorobenzene	0.5	0.001	8.1
105	1,4-dichlorobenzene	1.0	0.002	4.1
106	1,2-dichlorobenzene	0.7	0.002	2.3
71	bromomethane	1.1	0.002	2.9
91	bromodichloromethane	1.2	0.001	3.8
98	dibromochloromethane	0.5	0.001	5.1
99	1,2-dibromoethane	1.3	0.004	2.9
102	bromoform	1.0	0.002	3.1
	Ethers			
80	methyl tert-butyl ether	0.6	0.003	8.4
	Esters			
85	ethyl acetate	0.5	0.012	10.4
86	vinyl acetate	1.4	0.016	11.4
	Ketones			
	acetone	1.7	0.029	
82	methyl ethyl ketone	0.4	0.065	4.3
94	methyl isobutyl ketone	1.3	0.015	3.4
97	methyl butyl ketone	2.4	0.020	10.4
	Others			
	isopropanol	3.5	0.034	
81	tetrahydrofuran	0.9	0.003	12.6
76	carbon disulfide	1.6	0.012	7.0

[a] * detected by FID.

[b] N = 7, at around 1 ppbv

[c] Relative standard deviation (RSD) of the response factors (RF)