

Table S1. Difference frequency shifts obtained with the STW sensor array.

Samples were (a) chloroform, 11.6 ppmv, (b) octane, 11.5 ppmv, (c) xylene, 4.5 ppmv. Measurements were performed in triplicates every six months for a period of three years with the exception of octane, which was included in the study half a year later. The following tables summarize mean \pm standard deviation (S) values of the difference frequency shifts as well as relative standard deviations (RSD) obtained for each measurement date ($n = 3$). RSD values in the table result from unrounded mean and standard deviation values.

Table S1. (a) Chloroform, 11.6 ppmv

Sensor No.	Month 1		Month 7		Month 13		Month 19		Month 25		Month 31		Month 37	
	Mean \pm S	RSD	Mean \pm S	RSD	Mean \pm S	RSD	Mean \pm S	RSD	Mean \pm S	RSD	Mean \pm S	RSD	Mean \pm S	RSD
	[kHz]	[%]	[kHz]	[%]	[kHz]	[%]	[kHz]	[%]	[kHz]	[%]	[kHz]	[%]	[kHz]	[%]
1	17.90 \pm 0.30	1.7	18.52 \pm 0.37	2.0	17.42 \pm 1.80	10.3	16.60 \pm 1.57	9.5	18.37 \pm 0.59	3.2	17.72 \pm 0.51	2.9	18.87 \pm 0.71	3.8
2	2.25 \pm 0.06	2.6	1.98 \pm 0.11	5.5	2.03 \pm 0.30	14.9	1.63 \pm 0.14	8.4	1.91 \pm 0.13	6.5	1.63 \pm 0.04	2.6	1.80 \pm 0.04	2.4
3	7.81 \pm 0.12	1.5	8.07 \pm 0.23	2.8	7.35 \pm 0.80	10.9	7.11 \pm 0.69	9.6	7.56 \pm 0.28	3.7	7.40 \pm 0.24	3.2	7.61 \pm 0.31	4.0
4	4.75 \pm 0.07	1.5	4.69 \pm 0.16	3.3	4.22 \pm 0.42	9.9	4.19 \pm 0.40	9.5	4.42 \pm 0.21	4.8	4.37 \pm 0.15	3.5	4.51 \pm 0.21	4.7
5	1.90 \pm 0.04	1.9	1.91 \pm 0.13	6.6	1.86 \pm 0.21	11.5	1.75 \pm 0.16	9.2	1.94 \pm 0.07	3.6	1.80 \pm 0.06	3.5	1.95 \pm 0.06	2.9
6	3.22 \pm 0.04	1.3	3.27 \pm 0.11	3.4	3.22 \pm 0.34	10.6	2.92 \pm 0.27	9.3	3.39 \pm 0.13	3.9	3.06 \pm 0.09	2.9	3.36 \pm 0.11	3.3
7	1.04 \pm 0.01	0.8	1.11 \pm 0.03	2.8	1.03 \pm 0.11	10.6	0.98 \pm 0.09	9.1	1.10 \pm 0.05	4.2	1.05 \pm 0.03	2.9	1.13 \pm 0.04	3.6
8	2.41 \pm 0.07	2.7	2.62 \pm 0.10	4.0	2.64 \pm 0.29	11.1	2.41 \pm 0.24	10.0	3.01 \pm 0.11	3.8	2.55 \pm 0.08	3.0	3.17 \pm 0.09	2.8

Table S1. (b) Octane, 11.5 ppmv

Sensor No.	Month 1		Month 7		Month 13		Month 19		Month 25		Month 31		Month 37	
	Mean \pm S	RSD	Mean \pm S	RSD	Mean \pm S	RSD	Mean \pm S	RSD	Mean \pm S	RSD	Mean \pm S	RSD	Mean \pm S	RSD
	[kHz]	[%]	[kHz]	[%]	[kHz]	[%]	[kHz]	[%]	[kHz]	[%]	[kHz]	[%]	[kHz]	[%]
1	n/a	n/a	41.73 \pm 1.28	3.1	40.48 \pm 2.00	4.9	40.81 \pm 8.14	19.9	40.60 \pm 0.65	1.6	41.81 \pm 0.89	2.1	41.37 \pm 3.07	7.4
2	n/a	n/a	3.86 \pm 0.14	3.5	3.99 \pm 0.40	10.0	3.72 \pm 0.77	20.8	3.60 \pm 0.05	1.4	3.47 \pm 0.03	1.0	3.58 \pm 0.33	9.3
3	n/a	n/a	10.04 \pm 0.28	2.8	9.36 \pm 0.39	4.1	9.57 \pm 1.79	18.6	9.54 \pm 0.10	1.0	9.55 \pm 0.10	1.0	9.43 \pm 0.56	5.9
4	n/a	n/a	3.70 \pm 0.11	3.1	3.67 \pm 0.24	6.6	3.63 \pm 0.70	19.3	3.68 \pm 0.05	1.3	3.61 \pm 0.04	1.0	3.69 \pm 0.27	7.2
5	n/a	n/a	7.29 \pm 0.29	4.0	6.67 \pm 0.41	6.1	6.73 \pm 1.43	21.2	6.65 \pm 0.07	1.0	6.40 \pm 0.03	0.4	6.53 \pm 0.53	8.0
6	n/a	n/a	17.24 \pm 0.52	3.0	16.72 \pm 0.85	5.1	16.46 \pm 3.26	19.8	16.83 \pm 0.34	2.0	15.93 \pm 0.29	1.8	16.00 \pm 1.30	8.1
7	n/a	n/a	4.69 \pm 0.14	3.0	4.39 \pm 0.24	5.4	4.68 \pm 0.91	19.4	4.74 \pm 0.08	1.7	4.95 \pm 0.08	1.7	4.92 \pm 0.40	8.1
8	n/a	n/a	26.39 \pm 0.90	3.4	26.76 \pm 1.45	5.4	26.99 \pm 5.73	21.2	27.82 \pm 0.70	2.5	27.96 \pm 0.48	1.7	28.61 \pm 2.34	8.2

Table S1. (c) Xylene, 4.5 ppmv

Sensor No.	Month 1		Month 7		Month 13		Month 19		Month 25		Month 31		Month 37	
	Mean \pm S [kHz]	RSD [%]	Mean \pm S [kHz]	RSD [%]	Mean \pm S [kHz]	RSD [%]	Mean \pm S [kHz]	RSD [%]	Mean \pm S [kHz]	RSD [%]	Mean \pm S [kHz]	RSD [%]	Mean \pm S [kHz]	RSD [%]
1	49.59 \pm 3.92	7.9	50.00 \pm 2.98	6.0	50.40 \pm 8.93	17.7	39.35 \pm 6.42	16.3	47.28 \pm 7.93	16.8	46.70 \pm 6.14	13.1	47.45 \pm 4.06	8.5
2	4.67 \pm 0.21	4.4	3.99 \pm 0.38	9.4	4.24 \pm 0.72	17.0	2.92 \pm 0.47	16.0	3.75 \pm 0.70	18.7	3.17 \pm 0.33	10.5	3.50 \pm 0.37	10.6
3	27.35 \pm 2.06	7.5	27.86 \pm 1.51	5.4	24.19 \pm 2.87	11.9	21.98 \pm 3.33	15.2	22.80 \pm 2.42	10.6	24.92 \pm 2.71	10.9	21.93 \pm 1.33	6.1
4	8.17 \pm 0.67	8.2	7.28 \pm 0.50	6.8	6.99 \pm 1.15	16.4	5.81 \pm 0.88	15.2	6.76 \pm 1.17	17.2	6.67 \pm 0.79	11.9	6.63 \pm 0.64	9.6
5	7.78 \pm 0.52	6.7	6.94 \pm 0.63	9.0	6.79 \pm 1.20	17.6	5.19 \pm 0.79	15.3	6.48 \pm 1.18	18.2	6.01 \pm 0.70	11.6	6.21 \pm 0.56	9.0
6	12.81 \pm 0.92	7.2	12.37 \pm 0.82	6.6	12.65 \pm 2.19	17.3	9.66 \pm 1.52	15.8	12.10 \pm 2.10	17.4	11.09 \pm 1.38	12.4	11.60 \pm 1.00	8.6
7	3.18 \pm 0.19	6.1	3.35 \pm 0.14	4.2	3.36 \pm 0.57	17.0	2.75 \pm 0.43	15.6	3.40 \pm 0.56	16.6	3.35 \pm 0.39	11.5	3.49 \pm 0.32	9.3
8	14.10 \pm 1.11	7.8	14.50 \pm 1.30	9.0	16.05 \pm 3.10	19.3	11.96 \pm 2.07	17.3	16.46 \pm 2.81	17.0	15.06 \pm 2.32	15.4	16.91 \pm 1.38	8.2