Supplementary Information

Table 1: The SPCP values for the standard scenario, typical mixing ratios from the literature (ppb), the product of the SPCP and the mixing ratio and the reference number.

VOC	SPCP	typical mixing ratio /ppb	SPCP x mixing ratio	reference
Terpenes				
limonene	0.270	4.1	1.10	1
α-pinene	0.151	1.2	0.18	1
β-pinene	0.031	0.3	0.009	2
Alkanes				
ethane	0.0003	17.0	0.005	2
n-butane	0.0021	3.9	0.008	2
n-pentane	0.0025	1.1	0.003	1
n-hexane	0.0031	0.4	0.001	1
n-heptane	0.0027	0.3	0.0009	1
decane	0.0003	0.2	0.0001	1
undecane	-0.0001	0.1	-0.00001	1
dodecane	-0.0004	0.03	0.00001	1
cyclohexane	0.0031	0.09	0.0003	1
Alkenes				
Ethene	0.0101	1.5	0.02	3
Propene	0.0647	0.5	0.03	3
1-butene	0.0422	0.07	0.003	assume average value of other measured butenes
methylpropene	0.0712	0.5	0.04	3
cis-2-butene	0.457	0.03	0.01	2
trans-2-butene	0.609	0.04	0.02	2
Isoprene	0.0708	1.1	0.08	1
1,3-butadiene	0.0520	0.04	0.002	2
Alcohols				
methanol	-0.0012	85.8	-0.1	2
Ethanol	-0.0012	253.6	-0.3	2
ethylene glycol	0.0044	6.6	0.03	4
MBO	0.0499	1.1	0.06	assume same as isoprene
MIBKAOH	0.0031	0.4	0.001	assume average of C_3-C_5 alcohols
n-propanol	0.0053	0.5	0.003	1
i-propanol	0.0021	0.6	0.001	5
n-butanol	0.0046	0.5	0.002	1
t-butanol	0.0010	0.06	0.0001	1
3-pentanol	0.0102	0.2	0.002	1

2-butoxyethanol	0.0106	0.4	0.004	1
Aromatics				
benzene	0.0112	0.4	0.004	1
toluene	0.0582	2.1	0.1	1
1,3,5-trimethylbenzene	0.0546	0.07	0.004	1
1,2,3- trimethylbenzene	0.199	0.09	0.02	1
1,2,4- trimethylbenzene	0.118	0.3	0.03	1
styrene	0.0647	0.1	0.009	1
ethylbenzene	0.0842	0.3	0.02	1
m-xylene	0.0900	0.5	0.04	1
i-propylbenzene	0.0778	0.008	0.0006	1
o-xylene	0.0634	0.3	0.02	1
Ketones				
MEK	0.0017	0.4	0.0007	1
acetone	0.0002	1.7	0.0003	1
cyclohexanone	0.0040	0.09	0.0004	1
MIBK	0.0030	0.05	0.0002	1
MPRK	0.0013	0.1	0.0002	1
Aldehydes				
HCHO	-0.0876	15.3	-1.3	6
acetaldehyde	-0.149	3.4	-0.5	6
hexanal	-0.0016	1.9	-0.003	1
heptanal	-0.0035	0.4	-0.002	1
octanal	-0.0059	0.5	-0.003	1
nonanal	-0.0085	1.2	-0.01	1
decanal	-0.0096	0.2	-0.002	1
methacrolein	0.0127	0.8	0.01	assume average C_8-C_{10} aldehydes
benzaldehyde	-0.0112	0.6	-0.006	1
Chloro-compounds				
CH_3CCl_3	0.00004	0.26	0.00001	7
tetrachlorethene	0.0029	0.04	0.0001	1
chloroform	0.0001	0.1	0.00001	1
trichloroethene	0.0028	0.01	0.00003	5
CH_2Cl_2	0.00028	0.88	0.0002	7
1,2-dichloropropane	0.0003	0.002	0.0000006	5
Acids				
formic acid	0.0001	11.8	0.001	6
acetic acid	0.0008	36.3	0.03	6

[1] Li et al. (2019) Geometric means (GM) from a major survey campaign carried out over a 24-month period in 2012 and 2013 to monitor 88 selected VOCs in 3524 Canadian residential homes

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[5] Zhu et al. (2013): GMs from measurements of 84 VOCs measured in 3218 houses, 546 apartments, and 93 other dwelling types between 2009-2011 in Canada.
[6] Uchiyama et al. (2015): VOCs were measured in 602 houses throughout Japan in winter and summer 2011-2014. The average of the summer and winter median values was used.
[7] Hodgson and Levin (2003): GMs from a review of concentrations reported in existing residences.

Supplementary Information References

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