

Table 1. Constants, Distributions and Moments Used in the Simulations

All distributions are from McKone and Bogen (1992).

Permeability of the skin to MTBE is from Brown (1997), and the transfer efficiencies are calculated using the formulas in McKone and Bogen (1992).

Parameter description	Symbol	Distribution type	Arithmetic mean	Arithmetic standard deviation
Fluid intake per unit body weight (liters/kg-d)	IR/BW	Lognormal	3.0 x 10 ⁻²	1.2 x 10 ⁻²
Breathing rate per unit body weight (m ³ /kg-d)	BR/BW	Lognormal	0.4	0.5
Shower duration (hrs/d)	ETs	Lognormal	0.13	0.085
Shower water use rate per person (liters/hr)	Ws	Lognormal	480	160
Total water use in the house (liters/hr)	Wh	Lognormal	42	15
Exposure time in the bathroom (hr/d)	ETb	Lognormal	0.33	0.22
Surface area per unit body weight (m ² /kg)	SA/BW	Lognormal	0.027	0.0025
Exposure time in the house (hr/d)	ETh	Uniform	8	20
Ventilation rate in the shower (m ³ /hr)	VRs	Uniform	4	20
Ventilation rate in the bathroom	VRb	Uniform	10	100
Ventilation rate in the house (m ³ /hr)	VRh	Uniform	300	1200
Permeability of the skin (m/hr)	P	Constant	0.006	
Fraction of skin exposed during showering and bathing	FS	Uniform	0.4	0.9
Transfer efficiency from water to shower air	TEs	Constant	0.52	
Transfer efficiency from water to household air	TEh	Constant	0.4	

Table 2. Model I simulations of exposure to water supply with concentrations of MTBE from 1 to 30 ppb

Values in the percentage column are the percent of the population that would be exposed to levels above the de minimis exposure level of 6.8×10^{-4} mg

Concentration (in ppb)	percentage	Concentration (in ppb)	percentage	Concentration (in ppb)	percentage
1	0	11	25	21	75
2	0	12	30	22	80
3	0	13	35	23	82
4	0	14	40	24	90
5	0	15	47	25	95
6	6	16	55	26	>95
7	8	17	60	27	>95
8	10	18	65	28	>95
9	15	19	67	29	>95
10	20	20	72	30	>95