Supporting Information **for**

Measurement of phthalates in settled dust in university dormitories and its implications for exposure assessment

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This supporting information (4 pages) includes 3 tables.

Table S1. Equations used in the calculation of daily intakes

Pathway	Equation	Description	No.
Inhalation	$D_{inh} = \frac{(C_g + C_{sp}) \times IR \times EF}{BW}$	C_g is the gas-phase concentration and C_{sp} is the particle-phase concentration (μg/m^3), IR is the daily inhalation rate (m^3/day), EF is the exposure frequency (unitless), BW is the body weight (kg)	(S1)
Non-dietary ingestion	$D_{non-ing} = \frac{X_{dust} \times DR}{BW}$	X_{dust} is the mass fraction of phthalates in indoor settled dust (μg/g), DR is the daily intake rate of indoor dust (g/day)	(S2)
Dermal-gas absorption	$D_{derm-gas} = \frac{C_g \times K_{p\_g} \times SA \times f \times EF}{BW}$	K_{p_g} is indoor air transdermal coefficient (m/day), SA is the total skin surface area (m^2), f is the ratio of exposed skin surface area to the total area (unitless)	(S3)

Table S2. Mean values of physical properties for targeted phthalates

	DMP	DEP	DnBP	BBzP	DEHP	DOP
k_{p_g} (m/h)[a]	1.03	3.4	4.8	5.9	5.8	5.8[b]
logK_d (m^3/μg)	-5.48[c]	-4.79[c]	-3.17[c]	-1.4[c]	-1.21[d]	-1.32[d]
logK_p (m^3/μg)[e]	/	/	-2.57	-2.5	-1.3	-1.74

[a]Values from Weschler and Nazaroff [1].
[b]Assumed to be the same as the value for DEHP.
[c]Calcualted based on Weschler and Nazaroff [2].
[d]Values from Wei et al. [3].
[e]Calculated as K_p=8.32K_d [3]

Table S3. Values of exposure factors for Monte-Carlo simulation

	Mean (CV)	Distribution
SA (m^2)	1.7 (0.04)[a]	lognormal
f_{night} (-)[b]	0.1 (0.3)	lognormal
f_{day} (-)[c]	0.3 (0.3)	lognormal
IR (m^3/day) [a]	18.9 (0.15)	lognormal
DR (g/day)[c]	0.05 (0.3)	lognormal
EF_{night} (h/day)[d]	8 (0.3)	lognormal
EF_{day} (h/day)[d]	14 (0.3)	lognormal

BW (kg)[a]	68.6 (0.1)	normal
ACH (h^{-1})[e]	0.46 (0.3)	lognormal
C_{p_out} ($\mu g/m^3$)[f]	83.5 (0.2)	lognormal

[a]Values from the exposure handbook for Chinese male adults [4].
[b]Ratio between skin surface area of the head and the total skin surface area (SA) [5].
[c]Values from Bu et al. [6].
[d]Reasonable assumption.
[e]Values from Li et al. [7].
[f]Derived from an online database (www.aqistudy.cn) for the winter season in Hangzhou.

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