

Table S1. Definitions and values of parameters used in Equations 1–8 for human health risk calculations.

Formula parameter for risk assessments			Reference value (RfD) and cancer slope factor (SF) for potentially toxic elements ^[1]				
Parameters	Meaning	Value	Potentially toxic element	Oral RfD (mg/kg/day)	Dermal RfD (mg/kg/day)	Oral CSF(mg/kg-day) ⁻¹	Dermal CSF(mg/kg-day) ⁻¹
C _{hm}	Concentration of potentially toxic elements	mg L ⁻¹	As	300E-04	1.23E-04	1.50E+00	3.66E+00
IngR	Ingestion rate	2.0 L day ⁻¹ ^[2]					
EF	Exposure frequency	350 day year ⁻¹ ^[2]					
ED	Exposure duration	70 year ^[2]					
BW	Body weight	70 kg ^[3]					
AT	average life time	25550 days ^[2]					
SA	Drinking water exposed skin area	18,000 cm ² ^[2]					
K _p	Coefficient for dermal permeability	0.001 cm h ⁻¹ ^[2]					
ET	exposure time	0.58 h day ⁻¹ ^[2]					
f _i	Factor for unit conversion	L 1000 cm ⁻¹ ^[4]					

1. De Miguel, E.; Iribarren, I.; Chacón, E.; Ordoñez, A.; Charlesworth, S. Risk-based evaluation of the exposure of children to trace elements in playgrounds in Madrid (Spain). *Chemosphere* **2007**, *66*, 505-513, doi:<https://doi.org/10.1016/j.chemosphere.2006.05.065>.
2. Xiao, J.; Wang, L.; Deng, L.; Jin, Z. Characteristics, sources, water quality and health risk assessment of trace elements in river water and well water in the Chinese Loess Plateau. *Sci. Total Environ.* **2019**, *650*, 2004-2012, doi:<https://doi.org/10.1016/j.scitotenv.2018.09.322>.
3. Liang, B.; Han, G.; Liu, M.; Yang, K.; Li, X.; Liu, J. Distribution, Sources, and Water Quality Assessment of Dissolved Heavy Metals in the Jiulongjiang River Water, Southeast China. *Int. J. Environ. Res. Public Health* **2018**, *15*, doi:10.3390/ijerph15122752.
4. Liu, X.; Song, Q.; Tang, Y.; Li, W.; Xu, J.; Wu, J.; Wang, F.; Brookes, P.C. Human health risk assessment of heavy metals in soil-vegetable system: A multi-medium analysis. *Sci. Total Environ.* **2013**, *463-464*, 530-540, doi:10.1016/j.scitotenv.2013.06.064.