

Supplementary Materials



Figure S1. The image of Plasma-Mass Spectrometer (ICP-MS, NexION 350D, PerkinElmer, USA)

Table S1. The values of the exposure parameters

Parameter	Reference value		Unit	Reference
	Adult	Child		
IR	0.37	0.21	kg/day	[1]
EF	350	350	day/year	[2]
BW	63	29	kg	[3]
I _{ng} R	100	200	mg/day	[4]
SA	5700	2800	cm ²	[5]
AF	0.07	0.2	mg/cm ² /day	[6]
ABS	0.001 (As: 0.03)		-	[4]
I _{nh} R	16	7.6	m ³ /day	[8]
PEF	1.36×10 ⁹		m ³ /kg	[6]

Table S2. Reference values of RfD and CSF of heavy metals through different exposure pathways

Heavy metal	RfD (mg/kg/day)			CSF (mg/kg/day) ⁻¹		
	Oral ingestion	Dermal contact	Inhalation	Oral ingestion	Dermal exposure	Inhalation
Cr	1.5 ^a	6×10 ⁻⁵	2.86×10 ⁻⁵	-	-	-
Ni	2×10 ⁻²	5.4×10 ⁻³	2.06×10 ⁻²	-	-	-
Cu	4×10 ⁻²	1.2×10 ⁻²	4.02×10 ⁻²	-	-	-
As	3×10 ⁻⁴	1.23×10 ⁻⁴	3×10 ⁻⁴	1.5, 25.7 ^b	3.66	15.1

Cd	1×10^{-3}	1×10^{-5}	1×10^{-3}	-	-	6.3
Pb	3.5×10^{-3}	5.25×10^{-4}	3.52×10^{-3}	8.5×10^{-3}	-	-

Note: The reference values were obtained from U.S. Environmental Protection Agency [9-15].

a - Cr mainly exists in the forms of Cr(III) and Cr(VI), and Cr(VI) will be rapidly reduced to Cr(III) by human gastric juice. Therefore, the *RfD* value of Cr(III) was chosen to calculate HQ instead of total chromium in the study.

b – The CSF value of $1.5 \text{ (mg/kg/day)}^{-1}$ for i-As corresponds to skin cancer, while the CSF value of $25.7 \text{ (mg/kg/day)}^{-1}$ is used for bladder and lung cancer.

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