

Metal(loid) speciation in dermal bioaccessibility extracts from contaminated soils and permeation through synthetic skin

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Table S1

Composition of artificial SSFLs formulations

Chemical, % (w/w)	Sweat A ^a (pH = 6.5)	Sweat B ^b (pH = 4.7)	Sebum ^c
Deionized water	99.3	94	-
Sodium chloride	0.5	2	-
Lactic acid	0.1	1.5	-
Urea	0.1	0.5	-
Acetic acid	-	0.25	-
Ammonium chloride	-	1.75	-
Squalene	-	-	12.4
Jojoba oil	-	-	25
Triolein	-	-	44.6
Oleic acid	-	-	17
Vitamin E	-	-	1

^a According to standard EN 1811 (CEN, 2015)

^b According to standard NIHS 96-10 (Wainman et al., 1994)

^c According to Wertz (2009)

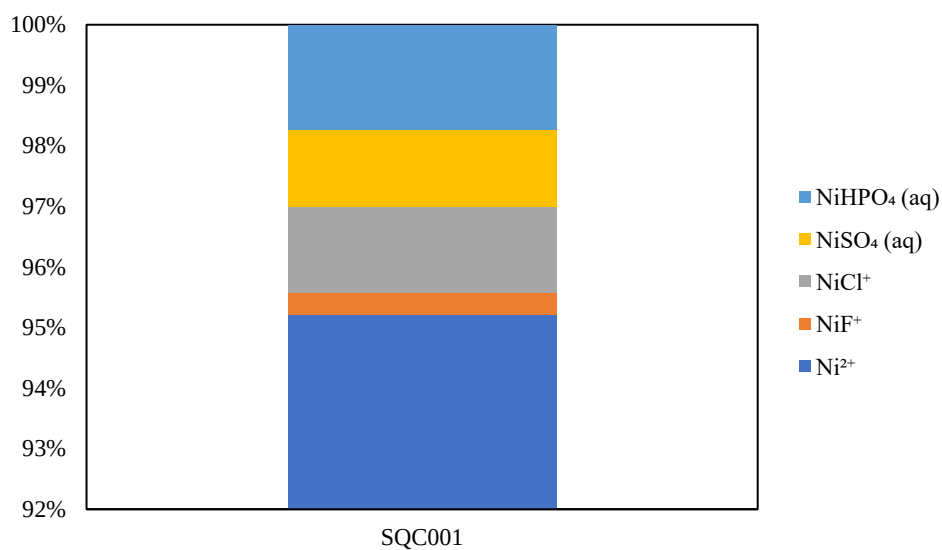
Table S2.

Bioaccessible percentage (%) of As, Cr, Cu, Ni, Pb, and Zn in Soils Using Synthetic sweat formulations A and B

Bioaccessible percentage (%)

Sweat A	Soil	As	Cr	Cu	Ni	Pb	Zn
	S2	1.3	0.12	0.13	<0.4	0.5	0.5
	S3	1.1	0.16	0.3	<0.4	4.4	2.7
	S6	3.1	0.11	0.09	<0.4	4.3	1.6
	S7	1.4	0.15	0.5	<0.4	<0.2	0.1
	S8	0.5	0.06	0.4	<0.4	<0.2	<0.2
	SQC001	0.06	0.13	2.1	20.4	0.4	40.3
Sweat B	S2	2.8	0.20	1.1	1.3	2.9	1.1
	S3	1.8	0.30	1.5	<0.4	31.6	6.0
	S6	0.7	0.24	0.5	<0.4	25.9	3.0
	S7	2.8	2.0	7.2	0.5	<0.2	9.0
	S8	0.8	1.0	2.9	0.8	<0.2	3.0
	SQC001	5.1	25.1	61.3	44.9	34.9	91.0

(a)



(b)

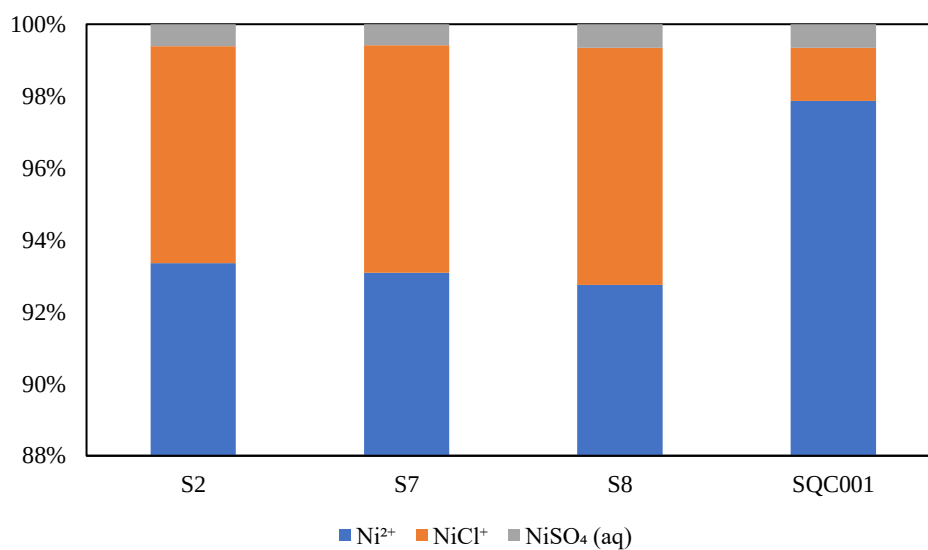
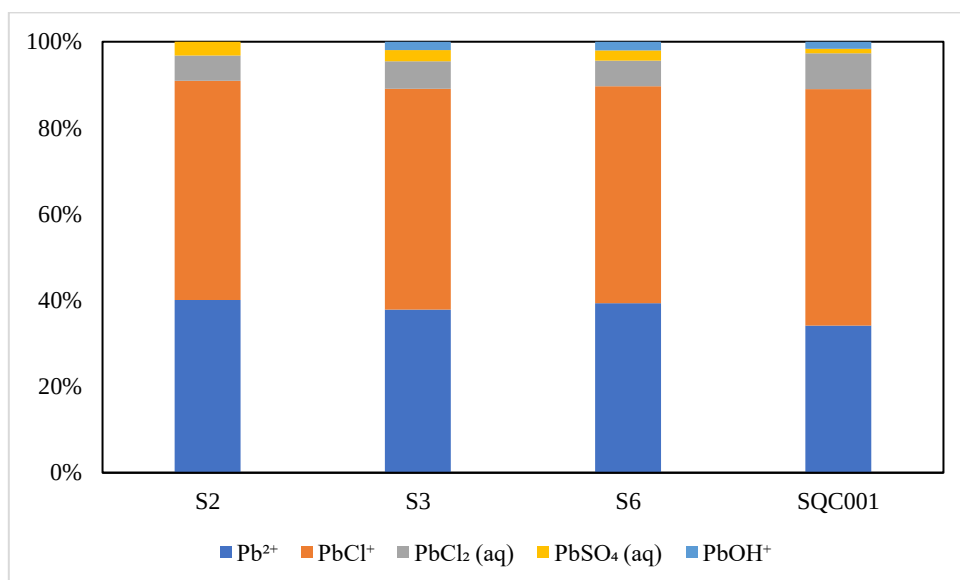


Figure S1 Nickel speciation (%) in: (a) Sweat A, (b) Sweat B

(a)



(b)

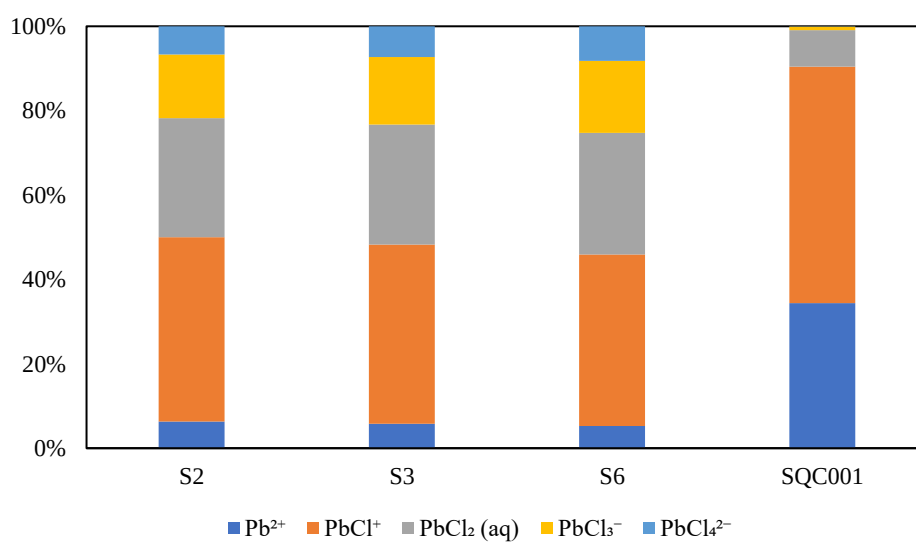
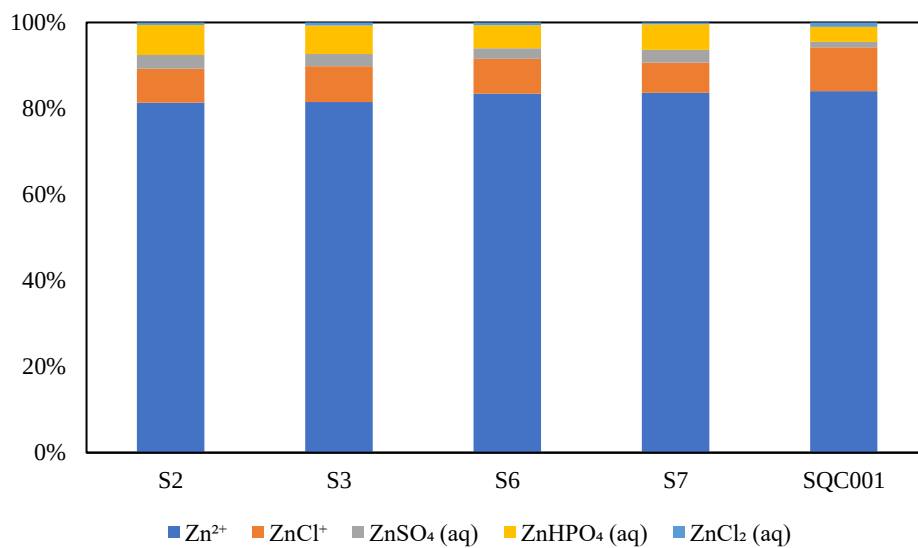


Figure S2 Lead speciation (%) in: (a) Sweat A, (b) Sweat B

(a)



(b)

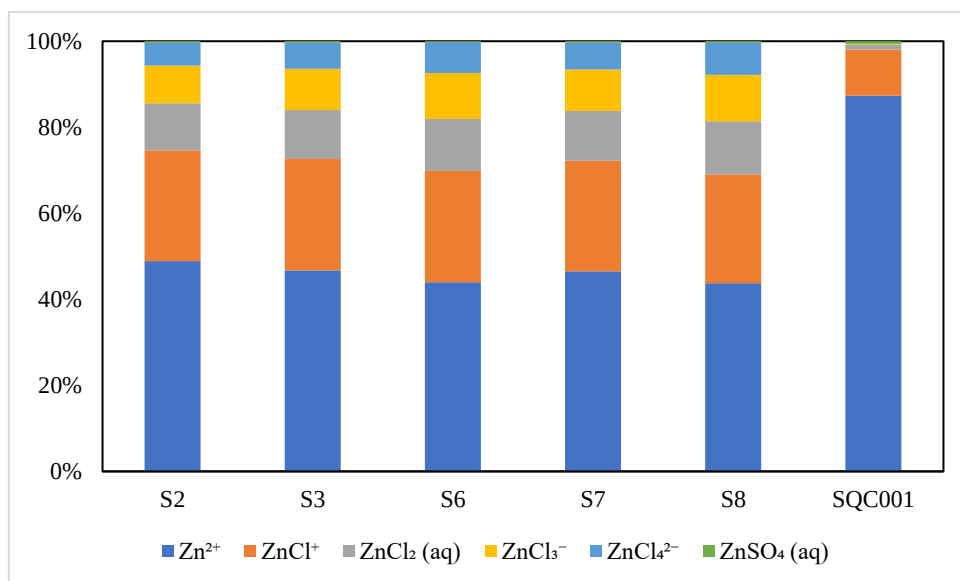


Figure S3 Zinc speciation (%) in: (a) Sweat A, (b) Sweat B