

Supplementary Table 2: Concentrations of trace elements detected in human milk: comparison with range recommended by AAP¹

Element	Type of milk	AAP-limit range	Interval (95%)		Lower range (%)	Upper range (%)	p-value	Element	AAP-limit range	Interval (95%)		Lower range (%)	Above range (%)	p-value				
			Lower	Upper						Lower	Upper							
Minerals (mg/L)																		
Ca	TC	200-300	233.43	257.29	0	60	<0.001	Na	120–250	106.14	231.61	80	0	<0.001				
	TI		250.92	290.27	0	13				99.05	145.68	40	0					
	TM		278.09	303.99	0	15				110.18	139.68	40	0					
	PM		280.36	310.17	0	15				124.48	138.30	50	0					
K	TC	400–550	308.14	458.78	20	0	>0.999	P	120–140	130.28	139.62	0	0	>0.999				
	TI		332.84	467.28	40	0				122.85	136.39	0	0					
	TM		405.31	462.89	20	0				121.67	135.10	10	0					
	PM		352.92	494.38	30	0				119.10	131.51	20	0					
Mg	TC	30–35	28.19	41.62	0	60	>0.999											
	TI		34.12	37.84	0	40												
	TM		36.21	40.17	0	20												
	PM		36.16	38.56	0	30												
Essential trace elements (µg/L)																		
Co	TC	0–0.14	0.049	0.065	0	0	>0.999	Mn	1–3	1.67	3.54	0	0	>0.999				
	TI		0.037	0.067	0	0				1.56	1.93	10	0					
	TM		0.039	0.050	0	0				1.44	1.92	0	0					
	PM		0.049	0.056	0	0				1.80	2.18	0	0					
Cu	TC	200-400	211.20	289.03	0	20	0.982	Se	10–30	9.90	11.73	50	0	<0.001				
	TI		236.02	302.29	0	10				9.44	10.38	50	0					
	TM		290.21	389.86	0	0				8.28	9.47	60	0					
	PM		251.03	279.63	0	0				4.22	9.72	80	0					

Fe	TC	300–900	162.82	211.32	0	0	>0.999	Zn	1000– 3000	762.22	1248.20	10	0	>0.999
	TI		166.09	204.46	0	0				797.25	1285.57	10	0	
	TM		157.97	198.96	0	0				1004.30	1471.22	10	0	
	PM		119.71	190.15	0	0				316.06	1401.85	0	0	
I	TC	40–250	94.96	122.3	0	0	>0.999							
	TI		109.37	134.52	0	0								
	TM		106.84	149.12	0	0								
	PM		84.57	105.79	0	0								
Toxic trace elements (µg/L)														
Cs	TC	0–5	2.84	8.12	0	10	<0.001	Sr	30–50	40.34	50.50	0	50	<0.001
	TI		3.01	5.33	0	10				34.33	42.03	0	30	
	TM		2.71	3.55	0	10				33.40	39.32	0	0	
	PM		5.17	10.17	0	70				42.78	55.95	0	70	

* Elements in bold and italic indicate the type of human milk statistically significant

Abbreviations: Ca, calcium; Co, cobalt; Cs, cesium; Cu, copper; Fe, iron; I, iodine; K, potassium; Mg, magnesium; Mn, manganese; Na, sodium; P, phosphorus; PM, preterm milk; Se, selenium; Sr, strontium; TC, full-term colostrum; TI, full-term intermediate milk; TM, full-term mature milk; Zn, zinc.

I. American Academy of Pediatrics Committee on Nutrition. Trace elements. In: Pediatric nutrition, 8th, Kleinman RE, Greer FR (Eds), American Academy of Pediatrics, Itasca, IL 2019.