

Data Integration of Critical Elements from Mine Waste in Mexico, Chile and Australia

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Supplementary Material

Table S1. Collected data from Mexico. In excel file.

Table S2. Collected data from Chile. In excel file.

Table S3. Characteristics of Australian tailings sites used in this study.

Site Name	Location	Mineralogy	Number of Samples Collected	Depth of Samples Collected	Site Owner
Capri-corn Copper	NW Queensland situated in the western fold belt of the Mt. Isa Inlier.	Cobalt Copper	136	Surface to 10m	(29Metals, 2021)
Wolfram Camp	90 Km West from Cairns, North east Queensland.	Tungsten Molybdenum	57		(Queensland Government, 2021)
Mount Garnet	161 km SW of Cairns in northeast Queensland	Zinc Lead Copper Gold Silver	72	Surface to 5.5m	(Consolidated Tin Mines Lmted. , 2021)
Heberton	75 km west of Innisfail and 64km southwest of Cairns. It is situated on the Wild River, a tributary of the Herbert River.	Tin Lode Tungsten Copper Zinc Gold	62	Surface to 1.2m	(Queensland Government, 2016)
Rocklands	15 km northwest of Cloncurry, Central Queensland	Copper Cobalt Gold Iron Magnetite	60	Surface to 6m	(Mining Technology, 2019)
Horn Island	Part of the Torres Strait Island group at the tip of Cape	Gold	24	Surface to 5m	(Queensland Government, 2021)

York Peninsula, Australia's
northernmost point.
1,030km North of Cairns.

Table S4. Detection Limits for the Australian Tailings Samples used in this study.

ME-MS61 (0.25g)	Ana-lyte	Ag ppm	Al ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe pct	Ga	Ge ppm
	Lower limit	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05
	Upper Limit	100	50	10,000	10,000	1000	10,000	50	1000	500	10,000	10,000	500	10,000	50	10,000	500
	Ana-lyte	Hf ppm	In ppm	K ppm	La ppm	Li ppm	Mg pct	Mn ppm	Mo ppm	Na ppm	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S pct
	Lower limit	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01
	Upper Limit	500	500	10	10,000	10,000	50	10,000	10,000	10	500	10,000	10,000	10,000	10,000	50	10
	Ana-lyte	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti pct	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
	Lower limit	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02	0.1	1	0.1	0.1	2	0.5
	Upper Limit	10,000	10,000	1000	500	10,000	100	500	10,000	10	10,000	10,000	10,000	10,000	500	10,000	500