

ENCON Laboratory
Ore/Tailings/Waste Acid Rock Drainage
(Static and Kinetic) Tests



TEST/ANALYSES	SYMBOL	METHOD	PARAMETERS	INSTRUMENT
Sample Particle Size, Crushing, Grinding			-	Jaw Crusher Ring Mill
Particle Size Analysis		ASTM C136-06	-	Retsch Sieve Set
Acid-Base Account Test Acid Neutralization Potential (NP)	ABA NP	EPA 600/2-78-054 ASTM E 1915 TS EN 15875 Sobek, 1989, 1996	Acid Neutralization Potential NP NP/AP NNP	Wet Chemistry
Sulfur Forms - Acid Generation Potential (AP)	AP	ASTM 1915, 2007 EPA 600/2-78-054 (LECO Induction)	Total Sulfur, S, Sulfate leached in acid, SO ₄ -S, Sulphide Sulfur, S ⁻² -S Acid Generation Potential	LECO Wet Chemistry
Mineralogical Analysis			For minerals and semi quantitative distribution, SiO ₂ , Al ₂ O ₃ , Cr ₂ O ₃ , Fe ₂ O ₃ , Na ₂ O, K ₂ O, CaO, FeO, MgO, MnO, TiO ₂ , P ₂ O ₅ , LOI	XRD, XRF
Whole Rock Elementary Analysis	WREA	EPA 6020 B EPA 6010 D EPA 200.7	Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Se, Si, Sn, Sr, Th, Ti, Tl, U, V, W, Zn	ICP-MS ICP-OES
Leach Test	LT	ASTM D3987 BS EN 12457-1:2002 TS 15863 TS 15864 TS EN ISO 17294	Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Se, Si, Sn, Sr, Th, Ti, Tl, U, V, W, Zn and anions, pH, acidity, reactive phosphorus	ICP-MS ICP-OES IC Spectrophotometer
Surface Washing/Crushed/ Paste pH Measurement	pH	Sobek, 1978	pH Surface washing pH Crushed sample pH	Wet Chemistry
Total Inorganic Carbon- Carbonate Neutralization Potential (CNP)	TIC	EPA-600/2-78-054 ASTM E 1915	TIC and TOC as %C or as %CO ₂ Carbonate Acid Neutralization	LECO
Net Acid Generation Test (NAG)	NAG	AMIRA (2002)	Net Acid Generation (kg H ₂ SO ₄ /ton)	Wet Chemistry
Humidity Cell Test - Kinetic Test	KT	ASTM D 5744-96 TS EN ISO 17294 (ICP-MS) EPA 6020 B (ICP-MS)	Leach Volume pH Alkalinity Acidity Conductivity Sulfate Chlorine, Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Se, Si, Sn, Sr, Th, Ti, Tl, U, V, W, Zn, total reactive phosphorus, fluoride	Wet Chemistry IC ICP-MS ICP OES Spectrophotometer
Dynamic Monolithic Leaching Tests	MLT	TS CEN 15863: 2015-10 TS CEN 15864: 2016-03	pH, Alkalinity, Acidity, Conductivity, Sulfate, Chloride, Total Organic Carbon, Fluoride, Total Dissolved Solids, Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Se, Si, Sn, Sr, Th, Ti, Tl, U, V, W, Zn	Wet Chemistry IC ICP-MS ICP OES Spectrophotometer