

BGI Laboratory Services and Products Table

EQUIPMENT/TECHNIQUE	TYPE OF SAMPLE	PARAMETERS/ANALYTES TESTED
Microwave Digestion System	Sample preparation for Soil, Rocks, ores, vegetation, Water	Major and trace elements
The Ox Advanced Fusion instrument	Sample preparation for oxides, cement, geological samples.	Major and trace elements
ICP-OES 7300 DV	Soil, Rocks, Precious Metals and Water	Al, Au, Be, Cd, Co, Cr, Cu, Fe, Mn, Pb, Zn etc. Rare Earth Elements
ICP-MS	Soil, Rocks, Precious Metals and Water	Trace and Ultra trace elements, Rare Earth Elements etc
Zetium X-Ray Fluorescence	Soil, Rocks, ores,	Al ₂ O ₃ , SiO ₂ , Fe ₂ O ₃ , MgO, CaO, MnO, Na ₂ O, K ₂ O, P ₂ O ₅ and TiO ₂ , Single elements
Ion Chromatography (ICS 3000)	Water	F ⁻ , Br ⁻ , Cl ⁻ , No ₂ ⁻ , No ₃ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻ , Ca ²⁺ , Mg ²⁺ , Na ⁺ , K ⁺ , pH & EC
Auto-Titrator	Water	pH, Conductivity, Alkalinity, Chloride, Temp, TDS
X-Ray Powder Diffraction	Rock & soil	Mineral identification
Laser Diffraction	soil	Grain size distribution
Alpha Diamond Analyser	rock	Diamonds identification and classification
Sieving	Soil & aggregates	Grain size distribution
Presidium Diamond Tester	rock	Minerals identification
Polarising Microscope	Thin sections	Minerals properties
Reflectance Microscope	minerals	Minerals properties
Hardness Tester	minerals	Mineral hardness
Compression machine	Rock & solids	Strength
Aggregate Impact Tester	Rock & solids	Strength
Jaw crusher	rock	Sample preparation
Aggregate Crushing Value	rock	Strength
Mill Barrels	Rock & soil	Powdered samples
Discoplan Ts & RotaPol	Rock	Thin section

Brick-earth properties	Clay	Atterberg limits, shrinkage, water absorption, loss on ignition, strength, efflorescence, firing temperature
Pottery	Clay	Atterberg limits, shrinkage, firing temperature, strength
Loss Angeles Abrasion	rock	Abrasion resistance
Water Absorption	Rock	% water absorption
Methylene blue	Rock	% clay content
Specific gravity	Rock /soil	Specific gravity
Bulk Density	rock	Density