

**BOTSWANA
GEOSCIENCE INSTITUTE**

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LABORATORY SERVICES PRICE LIST AS AT October 2018

Botswana Geoscience Institute				
TECHNIQUE	Service (Element / Analysis Package)	Item Description	Unit	Cost / analyte/ (BWP)
	Sample Preparation	Solids: Acid Decomposition, Fusion, press pellet or leaching	Per batch	70.00
		Liquids: pre-concentration, Dilution	Per batch	50.00
	Water Quality	Total Dissolved Solids (TDS) determination in Water and solid samples (Gravimetric)	Per sample	40.00
		Electrical Conductivity	Per sample	35.00
		pH	Per sample	35.00
		Bicarbonate Alkalinity	Per sample	35.00
		Carbonate Alkalinity	Per sample	35.00
		Total Alkalinity	Per sample	35.00
		IC set-up fee: Calibration	Per request	100.00

ION CHROMATOGRAPHY		Anions & Cations in potable and waste water and solids (F ⁻ , Cl ⁻ , Br ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ , NO ₃ ⁻ , SO ₄ ²⁻ K, Na, Ca, Mg, Li,)	Per sample	40.00 /analyte (anions & cations) 440.00
INDUCTIVELY COUPLED PLASMA OPTICAL EMISSION SPECTROMETRY		ICP set-up fee: Calibration	Per request	100.00
		Heavy metals analysis in water Quantitative ICP analysis of heavy metal elements in drinking and waste water (Al, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Sr, V, Zn etc)	Per sample	40.00 / analyte
ICP-MS		Trace elements analysis in water	Per sample	40.00/analyte
X-RAY FLUORESCENCE SPECTROMETRY		XRF set-up fee: Calibration	Per request	100.00
	Major Elements on fused bead	X-RF analysis for Oxides: Major elements on fused beads SiO ₂ , Al ₂ O ₃ , Fe ₂ O ₃ , CaO, MgO, K ₂ O, Na ₂ O, MnO, TiO ₂ , P ₂ O ₅	Per request	40.00 /Analyte (400.00)
		Loss-On-Ignition (LOI)	Per sample	40.00
	XRF Trace elements on pressed powder pellets (Method Dev / validation on going)	As, Ba, Bi, Ce, Co, Cr, Cs, Cu, Ga, Ge, Hf, La, Mo, Nb, Nd, Ni, Pb, Rb, Sc, Se, Sm, Sr, Ta, Th, Tl, U, V, W, Y, Yb, Zn, Zr etc.	Per analyte	40.00 / analyte
ICP-OES		ICP-OES set-up fee: Calibration	Per request	100.00
	Geochemical analysis on ICP-OES	Chemical analysis and ICP Ag, Al, Ba, Be, Ca, Cu, Cd, Co, Cr, Cu, Fe, Ga, In, Li, K, Mn, Na, Ni, Pb, Sr, V, Zn	Per sample	40.00 / analyte
ICP-MS		ICP-OES set-up fee: Calibration	Per request	100.00

	GeoChemical analysis on ICP-MS by acid decomposition sample prep	Chemical analysis on ICP – Major and traces Ag, Al, Ba, Be, Ca, Cu, Cd, Co, Cr, Cu, Fe, Ga, In, Li, K, Mn, Na, Ni, Pb, Sr, V, Zn Ru, Rh, Pd, Sn, Sb, Te, Hf, Ir,	Per sample	40.00 / analyte
	ICP-MS Rare Earth Elements analysis of rocks by fusion / acid sample prep	Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Th	Per sample	40.00 / analyte
	ICP-MS Semi-quantitative scan	ICP-MS Semi-quantitative scan	Per sample	40.00 / analyte
	Sample disposal after analysis	Sample disposal cost	Per sample	Price on request
	Consultation	Scientific consultation, method development / Validation and results interpretation	Per sample	Price on request
Service	Description		Unit	<i>Cost / per sample</i>
Sample preparation	Crushing		Per sample	<i>P35.00</i>
	Pulverizing / milling		Per sample	<i>P30.00</i>
	Drying		Per sample	<i>P30.00</i>
	Splitting		Per sample	<i>P30.00</i>
	Rock cutting		Per sample	<i>P50.00</i>
	Heavy mineral separation		Per sample	<i>P50.00</i>
	Rock Polishing		Per sample	<i>P100.00</i>
Mineralogical analysis (XRD method)	Mineral identification using XRD		Per sample	<i>P300.00</i>
	Specific gravity Test		Per sample	<i>P30.00</i>
	Hardness test		Per sample	<i>P30.00</i>
	Conductivity (Diamond tester)		Per sample	<i>P30.00</i>

	Reflective Index	Per sample	<i>P30.00</i>
	Microscopy	Per sample	<i>P30.00</i>
	Infra Red scanning	Per sample	<i>P100.00</i>
Thin section preparation	Covered thin section	Per sample	<i>P200.00</i>
	Polished thin section	Per sample	<i>P200.00</i>
	Polished sections	Per sample	<i>P200.00</i>
	Polished specimen	Per sample	<i>P200.00</i>
	Large thin section	Per sample	<i>P200.00</i>
Specific gravity	Determination of specific gravity for both rock and soil samples	Per sample	<i>P50.00</i>
Grain size analysis	Determination of soil particles size distribution using Laser Diffraction	Per sample	<i>P70.00</i>
	Determination of soil particles using test sieves	Per sample	<i>P50.00</i>
Compressive strength test	Determination of strength of materials using compression method	Per sample	<i>P70.00</i>
Full brick Earth/ Clay investigation/ testing	Physical properties test on clay	Per sample	<i>P2,500.00</i>
Calcium Carbonate content	Calcium carbonate content	Per sample	<i>P50.00</i>
Aggregates test	Aggregate Impact Value	Per sample	<i>P135.00</i>
	Los Angeles Abrasion	Per sample	<i>P135.00</i>
	Bulk density	Per sample	<i>P135.00</i>
	Water Absorption	Per sample	<i>P135.00</i>
	Bulk density	Per sample	<i>P135.00</i>
	Methylene Blue (include crushing & sieving)	Per sample	<i>P135.00</i>
	Specific gravity	Per sample	<i>P135.00</i>
Geotechnical Analysis	Particle size distribution (Sieve method)	Per sample	<i>P50.00</i>
	Atterberg Limits (Liquid limit, plastic limit, Plasticity index,shrinkage)	Per sample	<i>P150.00</i>

	Moisture content	Per sample	<i>P30.00</i>
	Specific gravity	Per sample	<i>P30.00</i>
	Organic content	Per sample	<i>P30.00</i>

NOTE. BGI reserves the right to change and amend these prices without prior notice.