

# MINING, MINERAL & SOIL APPLICATION

## HANDHELD & COUNTERTOP XRF SPECTROMETER

- Lightweight (1.5kg) & Weatherproof (IP54).
- Simple & Easy - GPS/Mapping & Rugged Mobile Printer.
- Detection of > 46 elements, from Mg to U.
- Light Element Analysis & Rare Earth Element (REE) Mineral Exploration.
- Factory Calibration for Gypsum, Cement & Limestone.
- On-site Geochemical Analysis.
- Graphene SDD - Superior Count Rates & Resolution.
- EasyCal™ - Comprehensive Software for Customize Empirical Calibration for Matrix Match Analytical Performance.
- In-situ Coefficient Correction Function - Easily modify existing calibrations after data collection for immediate improves the analytical performance when needed during site work.



S1 Titan Handheld XRF (Mg to U)



CTX CounterTop XRF Analyzer (Mg to U)



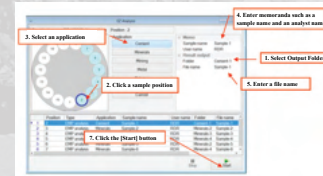
Limestone	
62	01-16 13:42
Time 19.0	
CaCO3	99.34 0.24
SiO2	0.29 0.06
Al2O3	0.29 0.05
Fe2O3	0.08 0.01



S1 Titan Mining Application Note

## BENCHTOP ENERGY DISPERSIVE X-RAY FLUORESCENCE (EDXRF)

- Secondary targets & Polarization (using close-couple Cartesian Geometry) essentially removes the background & create scattering 90° Monochromatic X-Ray Beam & Polarized Excitation.
- The Special Target (Si Target) optimizes the measurement of Na & Mg. Maximum up to 5 Secondary Targets cover the complete elemental range (Na-U) with optimized sensitivity.
- Advance FP - Rigaku RPF-SQX:
  - Profile Fitting routine automatically deconvolutes peaks in the spectrum.
  - A Matching Library can be easily built by the user with assayed standards of the actual material.
  - Scattering FP estimates the percentage of the sample that cannot be measured, element H-F. Ready FP Templates (without additional cost).
- Available analysis atmosphere - Air, Helium & Vacuum.
- NEX CG II He Gas Consumption flushing is the lowest - 0.35 L/min
- 15 position Autosampler spins samples for superior results with inhomogeneous samples.



Scan QR Code for more information

## POLARIZING / PETROGRAPHY MICROSCOPE

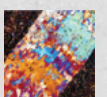
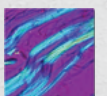
- User friendly interface, Easy to use & the microstructure of minerals can be analyze from micro- to nano-scale.
- Superior image quality of thin sections with multiple illumination methods to produce high contrast color intensity, crisp images of structure & composition with no distortion.
- Equip with Multiphase Software - Automatically segment & quantify optical microscopy images.
- Utilizes Advanced Image Analysis; Grain Size Analysis, Multiphase Analysis, Porosity, etc.
- Quick & Easy report generation on site.
- PETROG - Point-counting application designed to allow control of the digital stepping stage for a wide range of uses.



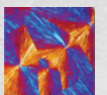
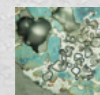
Polarising Microscope



Portable Microscope



PETROG





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## COMBUSTION GAS ANALYZER - CARBON & SULFUR ANALYZER

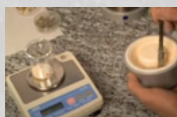
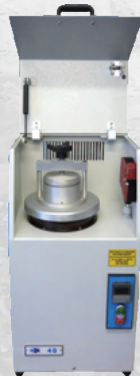
- Ideal for **low running cost, fast & precise result.**
- **ZoneProtect™** - Reduces splattering for complete .
- **Unique fully automatic cleaning system** with vacuum-free dust removal.
- **High efficiency combustion, integrated dust filter** which give cleaner environment & improved analytical precision.
- **Tool-free & Easy maintenance.**
- **Detection of CO2 by NDIR detector.**
- **HighSense™ SO2 Detection by UV LED.**
- **No interferences** for utmost stability & selectivity.
- Unmatched **lifetime & modulation speed of LED.**
- **Nafion®** - To continuously filter water vapour from ore sample.



## MINERAL SAMPLE PREPARATION

### GRINDING

- Compact, Portable Swing Grinder, Fully Balanced for lab operation.
- Various 100ml Grinding Vessels for effective grinding of about 30ml sample material.
- Reproducible setting by digital timer.
- Starting particle size approx 5mm.



Tungsten Carbide



Zirconia Oxide 99.9%



Grinding Swing Mill

### MANUAL/FULLY PROGRAMMABLE HYDRAULIC PRESS

- Designed for preparation of **Evacuatable Pellet Dies.**
- Hydraulic Presses designed to handle wide variety of pressing applications.
- Used for preparation of thin polymer films.
- Polycarbonate safety guards.
- **Adjustable** upper bolster & pressure control valve.
- Vacuum ports.

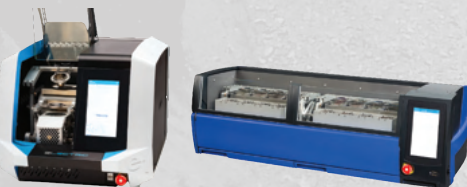


Hydraulic Press

## MINERAL SAMPLE PREPARATION

### GAS/ELECTRIC FUSION

- Fully automatic.
- **Circular stirring motion** for faster sample disintegrate.
- **Clip-on heating modules** for instant maintenance.
- **Powerful fan units** - Rapid cold-to-cold.
- See-through design - keep visual of **ALL** steps of fusion process.
- Filtered air flow for ultimate bead purity.



Gas Fusion Video



Gas Fusion



Electric Fusion

## CONSUMABLES

- **Certified Reference Material (CRM)**
- **Setting-Up Samples (SUS)**
- **Sample Cup & Thin Films**
- **Fusion Flux**
- **Platinum Labware**
- **Aluminium Caps**

