AXT

Mining & Minerals
Product Guide

Rigaku

WDXRF

Supermini200 Benchtop WDXRF

- World's highest power benchtop WDXRF
- Na to U capability for wide ranging applications
- Excellent light, medium & heavy element performance
- WDXRF performance at EDXRF price
- 12 position sample changer for unattended operation
- Vacuum, He and Air capability
- Optimum for low to medium throughput situations and/or as a backup for high throughput XRFs
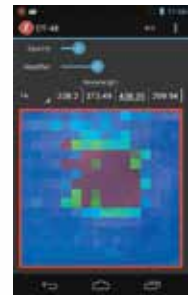
Rigaku

XRD

Miniflex 300 and 600

- Fully capable 300W & 600W benchtop
- Analysis in minutes with Fast 1D Detector
- Air or water cooled options
- 6 position sample changer option
- Automatic knife edge & sample spinner
- Co, Cu, Fe or Cr Anode Xray tube

SciAps
ANALYZE YOUR WORLD

Handheld LIBS

Z-Series

- Elemental mapping and heat maps
- Argon purge gives faster and more accurate results
- Patented cleaning approach eliminates sample prep
- Smallest, lightest, fastest LIBS available
- Android operating system
- No radiation training required

SciAps
ANALYZE YOUR WORLD

Handheld XRF

X-Series

- Latest tube & detector technology
- Lightweight ergonomic design
- Exceptional count rates
- Providing the fastest and most precise analyses
- Dual shield detector technology reduces accidental damage
- Android operating system with vibrant display
- Built-in camera for precise aiming and recording
- Wifi and Bluetooth connectivity

SPEX SamplePrep

Katanax
A Spex SamplePrep Company

TESCAN
PERFORMANCE IN NANOSPACE

Rigaku

ORBIS

SIGRAY

SciAps
ANALYZE YOUR WORLD

Element Analysis by
X-ray Fluorescence

Rigaku XRFs
- All Rigaku XRFs are designed to be used by beginners to those with advanced applications
- Easy to use ZSX Guidance software with the built in expertise and know how of skilled experts
- Factory calibrated options

Simultix
WDXRF
- High performance 4kW simultaneous WDXRF
- 30 elements with optional attenuators & background correction
- Light and heavy element sequential goniometer options
- 12, 48 or 96 position sample changer
- Tube above optics for all applications

WDXRF

Versatility

Smart Sample Loading System (SSLS)
- Primus WDXRF tube below spectrometer
- Mixed storage of powder, fusion and liquid samples
- Improves productivity and efficiency
- No requirement to manually load samples into cups
- Increased storage capacity
- Two dimensional barcoding allows sample tracking

Primus
- 4kW Sequential WDXRF
- Up to 40% better light element flux from tube technology
- Ultra stable dual pump vacuum system
- 48 or 96 position sample changer
- Optional tube above optics to suit pressed powders
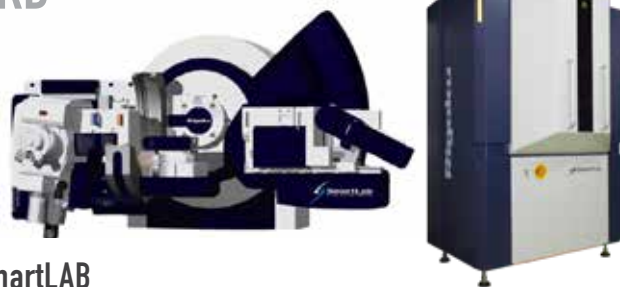- Point mapping to 0.5mm resolution option

Mineral Analysis by
X-ray Diffraction

Rigaku XRDs
- Fast, quantitative mineralogy, results in minutes
- Easy to maintain and use with step by step software allowing the novice to get the results of an expert
- Powder samples analysed in air, no messy acids, fusions or gases
- Many configurations available depending on throughput, speed, sensitivity of minor phases, or resolution

XRD

SmartLAB
- Ultra flexible high throughput bulk mineralogy analysis
- 6, 48 or 120 position sample changer
- The best res for clays and feldspars of any instrument
- 3kW sealed tube or 9kW rotating anode source
- Effortless automated alignment and guidance software
- Unmatched HyPIX photon counting detector
- HyPIX 3000 Hybrid Photon Counting Detector for no noise, better trace detection
- Seamless switch from 0D, 1D, 2D modes

Crushers

ORBIS Crushers OM50 & OM100

- Dual action fine jaw crusher
- Standard 7kg/15kg sample hopper
- Input sample size up to 60mm / 110mm
- Output 90% pass <2mm, single pass
- Up to 30% faster then similar crushers
- Optional sample lifter
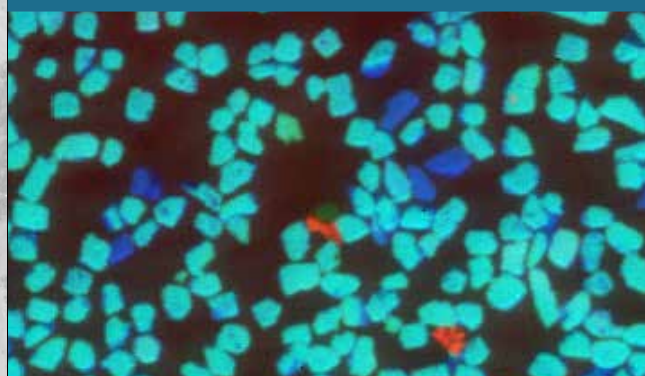- Rotary or linear sample divider combinations

Pulverisers

ORBIS OM222 Pulveriser

- High performance system
- Suitable for sample loads up to 1500g
- Programmable run timer
- Safety switch and interlocks
- Easy maintenance access

Fusion Beads

Katanax®
A Spex SamplePrep Company

15 per hour	30 per hour
X-300	X-600

Katanax X-300 and X-600

- Heating elements impervious to flux
- Auto locking safety shield
- Industrial LCD touch screen user interface
- Precise dynamic temperature control
- Single phase mains power
- All ceramic holders, no exposed metal in the furnace
- Caters for 30, 32, 35 and 40mm moulds
- X-300 available in single, dual or triple configuration
- X-600 high throughput – up to 30 samples per hour

Sample Prep

SPEX SamplePrep

Spex X-Press 3636 35-ton Pellet Press

- Fully programmable automated operation
- Ideal for repetitive pressing of 13–40mm pellets
- Suited to XRF, IR and other analytical techniques

AttoMap results for an "invisible gold"

sample of 3mm x 3mm with <100µm grains
Tri-channel composite image
Fe (blue), S (green), and Au (Red)

SIGRAY Micro XRF

3-5µm resolution	sub-ppm sensitivity	500 X faster mapping

AttoMap Trace Mineralogy Mapping

- Patented microXRF technology
- Synchrotron performance in a lab-scale instrument
- Next generation of microXRF
- Substantially higher resolution (e.g. 3–5µm MTF)
- Detectability of nanoparticles down to 50–100nm
- Up to 500X faster than conventional microXRF
- Sub-ppm and sub-femtogram sensitivity in seconds
- Dual energy X-ray source
- Map trace elements not just major elements

TESCAN
PERFORMANCE IN NANOSPACE

Automated Mineralogy

TIMA–X TESCAN Integrated Mineral Analyser

Quantitative Mineralogy
Fully characterise your deposit

Liberation Analysis
Metallurgical process optimisation

Particle Size and Texture
Determine your optimal grind size

Bright Phase Searching
Mineral association of microscopic gold

Automated Reporting
Easily customisable outputs

Revolutionary Robust Integrated Hardware
- Next generation SEM and X–ray detectors for unattended 24/7 analysis
- Fast ambient atmosphere to operating vacuum
- 100 sample autoloader for continuous throughput
- Remote operations

Powerful Quantitative EDX
- Fast data acquisition with integrated processors on 1–4 EDX detectors
- Direct quantification of TIMA spectra
- Superior detection limits by summing of low count spectra

Superior Software
- Interactive tools for simple mineral classification
- Offline=online for interrogating results and mineral reclassification
- Workspaces for routine outputs

automated mineralogy
incubator

TRY AUTOMATED MINERALOGY TODAY!
www.automatedmineralogy.com.au
The AMI offers flexible solutions from projects to time share

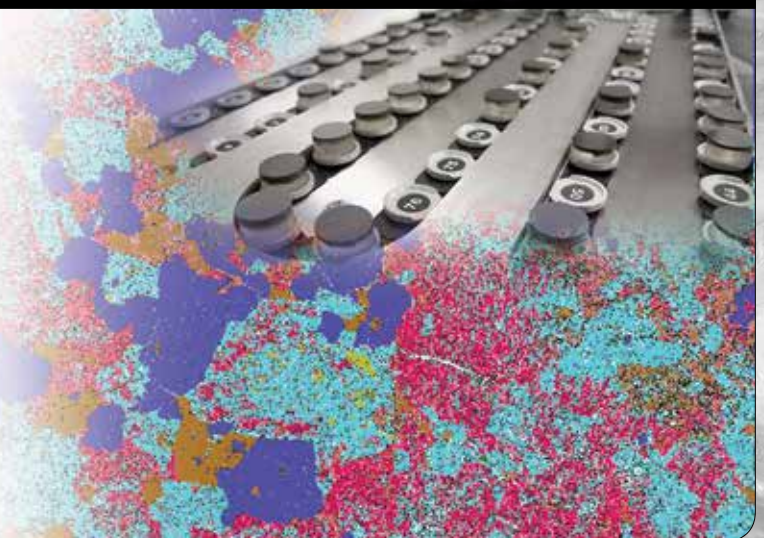### Understanding | Quantify the minerals present
- Fostering the understanding of automated mineralogy
- Detail the analytical procedure
- Determine the methodology involved

Demonstrating | Map process critical minerals
- Demonstrate the value to discoveries and optimisation
- Affordable fast turn–around time
- Train personnel to optimise data returns

Developing | Optimise metallurgical performance
- Support site specific developments and integration
- Facilitate network of skilled consultants and operators
- Foster ongoing developments of technologies

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