XRF

EPR

X-ray CT

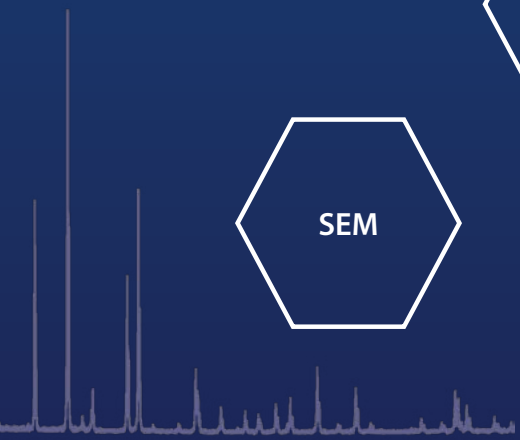
High-quality instruments for materials science and beyond

XRD

NMR

Thermal analysis

SEM



AddSPX

Introduction

AddSPX is a Benelux organization, part of Beun-De Ronde BV, a leading supplier of laboratory instruments for over 100 years. With a strong focus on elemental analysis and materials science, we are the exclusive partner of leading manufacturers such as Rigaku, CIQTEK and SEC.

AddSPX offers a broad range of high-quality instruments for Elemental, Structure and Surface Analysis.

With in-house application specialists and factory-trained service engineers, we ensure you get the most out of your instruments in terms of performance and continuity. We strongly believe that the best results are achieved by cooperation. Bringing together our experience in instruments, applications and technology, and your specific knowledge of your samples, process or research area will guarantee mutual success.

Who are we?

Support and Product Xperts

As Support and Product Xperts, we help laboratories with their analysis and research.

We introduce new technologies and developments of existing technologies to our customers to help them reach their goals.

Through our experience, versatility and organizational strength, our organization distinguishes itself as a company where every employee maximizes customer satisfaction, personal results, teamwork and communication skills. These principles help us establish a long-term relationship with our customers.

Our Support Engineers and Product Specialists cover the whole process from advising, demonstrating and developing the applications, installing and maintaining the laboratory instruments.

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Thermal Analysis

Rigaku

TGA and DSC



STAvesta

Thermogravimetric-Differential Scanning Calorimeter (TG-DSC). Simultaneous thermal analysis measurement of mass changes and endothermic/exothermic reactions.

- High-precision horizontal differential triple-coil balance for accurate correction
- Extensive measurement system lineup to meet diverse analytical needs
- Compatible with a wide range of furnaces -40 to 1500°C
- Standard furnace, high temperature furnace
- Sample observation furnace: in-situ camera for real time sample observation
- Indirect heated furnace
- Refrigerated cooling furnace

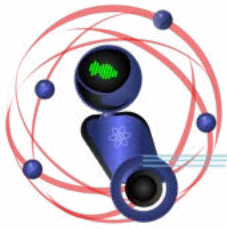
TMA



TMA8311

Thermomechanical Analyzer. Measurement of a mechanical property change in function of temperature.

- High-sensitivity, high-precision measurement by the differential expansion principle
- Flexible handling of various sample sizes
- Simple sample setting mechanism, the first of its kind in differential TMA
- Different measurement methods
  - Compression loading method
  - Tensile loading method
  - Penetration method
  - High-sensitivity differential penetration method
- Multi-measurement system that excels in expandability
- Notable enhancement of heating and cooling rates enabled by a compact electric furnace



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ED-XRF

Rigaku
Applied Rigaku Technologies



NEX QC II Series

Fast, non-destructive elemental testing made simple.
ED-XRF for everyday quality control

- Rapid, non-destructive elemental analysis
- Measurement of all elements from sodium (Na) to uranium (U)
- Coating thickness measurements
- 50 kV X-ray tube for wide elemental coverage
- Novel large-area graphene window silicon drift detector
- Multi-application versatility, including solids, liquids, alloys, powders, and thin films
- Easy sample preparation and no complex setups
- Various options, including autosampler and carrying case



NEX CG II Series

Enhanced elemental analysis for industrial quality control to advanced research applications

- Non-destructive elemental analysis for sodium (Na) to uranium (U)
- Indirect excitation for exceptionally low detection limits, also for light elements
- 50 W, 50 kV X-ray tube
- Large-area high-throughput silicon drift detector (SDD)
- Analysis in air, helium, or vacuum
- Quick elemental analysis of solids, liquids, powders, coatings, and thin films
- Various automatic sample changers accommodating up to 52 mm samples
- Best solution for standardless analysis of complex (organic) matrices
- Fundamental parameters (FP) method with scattering FP module to estimate XRF unmeasurable elements.

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X-Ray Fluorescence

Rigaku

WD-XRF



Supermini200

Benchtop sequential WD-XRF spectrometer analyzes O through U in solids, liquids and powders

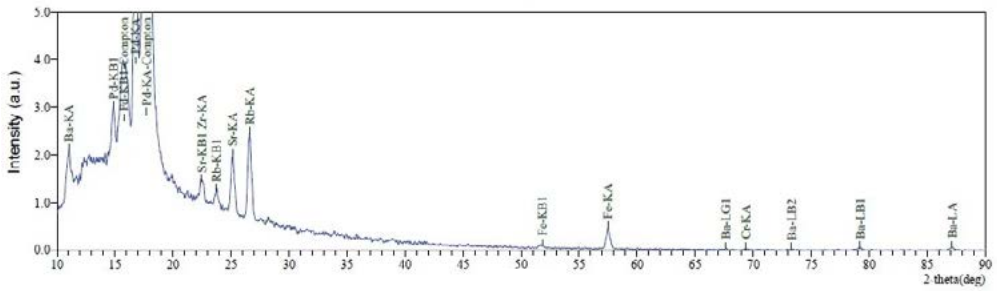
- Primary beam filter: Zr standard
- Automatic sample changer (ASC)
  - 10 sample positions (up to 51.5 mm diameter samples)
  - 12 sample positions (up to 44 mm diameter samples)
- Analyze solids, liquids, powders, alloys and thin films
- X-ray tube: 200 W Pd-anode
- Detectors: Scintillation counter and flow proportional counter



ZSX Primus IV

High power, tube above, sequential WDXRF spectrometer with comprehensive ZSX Guidance expert system software

- Analysis of elements from berylium (Be) en uranium (U)
- Tube above optics minimizes contamination issues and increases intensity
- X-ray tube with 30 µm Be window, the thinnest on the market
- Partitioning seal means the optics are always under vacuum
- Supports full automation with a belt conveyor



X-Ray Fluorescence

MICRO-XRF

Rigaku

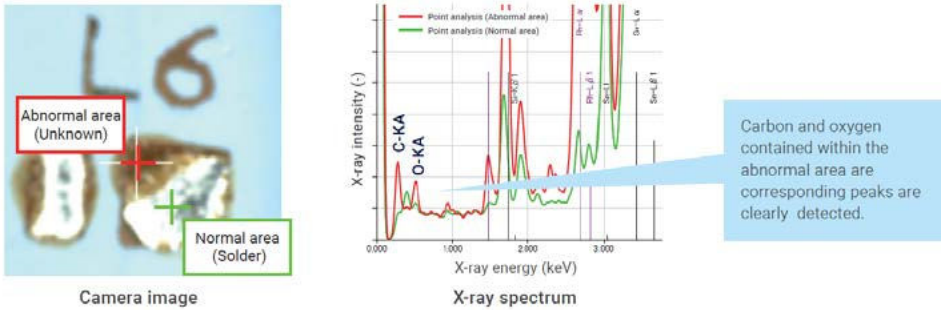


Qualana

New microfocus XRF spectrometer.
Qualana provides high analysis performance and high-quality data.

- Accurate irradiation at the target position: direct above irradiation optics
- Elemental mapping without gaps
- Measurement diameter switching
- Highly flexible quantification
- Detection of light elements

Example: Comparison of colored area and normal area on LED chip



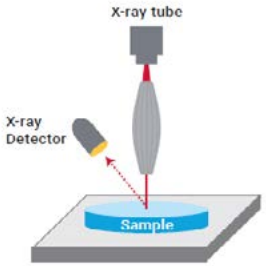
Camera image

X-ray spectrum

What is micro-XRF?

In microfocus XRF, primary X-rays generated by the X-ray tube are focused and intensified before being irradiated onto the sample.

While conventional XRF typically requires an analysis area of 10 mm diameter or larger, Qualana can obtain elemental information from areas as small as 20 µm in diameter. Furthermore, by scanning the sample stage during measurement, information on the elemental distribution across the whole sample surface can be obtained.



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X-Ray Diffraction

Rigaku

XRD



MiniFlex 600

Benchtop powder XRD.
Qualitative and quantitative phase analysis of polycrystalline materials.

- Compact, fail-safe radiation enclosure
- Incident beam variable slit
- Equipped with 8-position automatic sample changer
- 600 W X-ray tube
- Molecular structure determination
- Phase identification and phase quantification (phase ID)
- Percent crystallinity determination
- Crystallite size and strain detection
- GMP compliant software



SmartLab

Automated multipurpose XRD with guidance software.
Powder diffraction, thin film metrology, SAXS, in-plane scattering, operando measurements.

- Available in-plane arm (5-axis goniometer)
- HyPix-3000 high energy resolution 2D HPAD detector
- Operando measurements with SmartLab Studio II software. Measurements in 0D, 1D & 2D
- High-flux X-ray source: PhotonMax 9 kW rotating anode
- New cross-beam-optics (CBO) family:
  - Fully automated beam switchable CBO-Auto
  - High-resolution micro area CBO-µ



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X-ray Computed Tomography

X-ray CT

Rigaku



CT Lab HX

Versatile micro-CT scanner.
High-performance benchtop instrument.

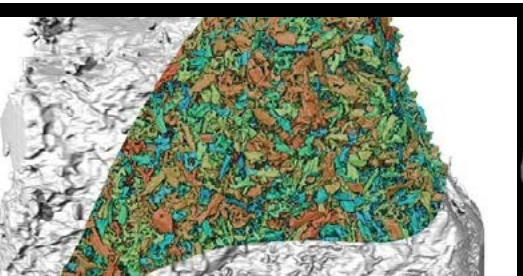
- Flexible design to cover high-resolution and large FOV (max 200 mm)
- Adjustable source to object and detector distances to optimize the geometry for a variety of resolutions and needs
- Offset scan mode doubles the effective detector size
- 2.1 µm voxel / 5 µm spatial resolution
- Compatible with autosampler for industrial quality control

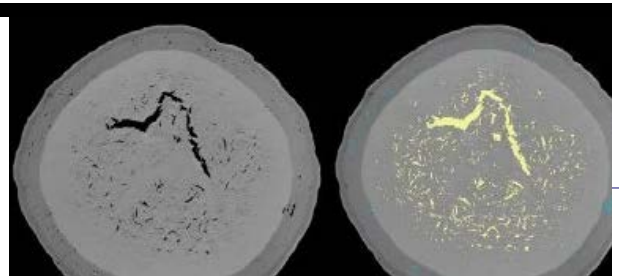


nano3DX

True submicron CT scanner with contrast-enhancing X-ray anode.

- 188 nm voxel / 500 nm spatial resolution
- Parallel beam geometry for true submicron resolution
- Shorter scan time
- Ultrabright 1200 W X-ray source and sCMOS detector to increase the X-ray count and detection efficiency
- Selectable pseudo-monochromatic X-ray radiations





Scanning Electron Microscopy

Benchtop SEM

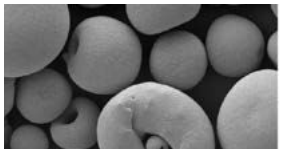
sec e-beam pioneer

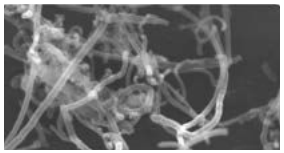


SNE-ALPHA

Compact tabletop SEM that combines high-resolution imaging, automated operation, and advanced analysis tools for efficient material characterization.

- 5 nm resolution and up to 250,000× magnification
- Fully motorized 5-axis sample stage
- Automated imaging and navigation functions
- Fast 90-second vacuum cycle in a compact benchtop format
- Can be equipped with an energy dispersive X-ray detector (EDX)





SEM

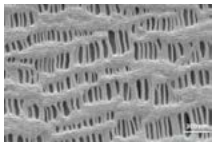
CIQTEK

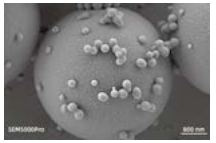


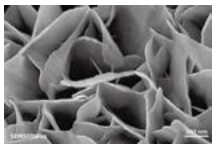
SEM5000Ultra

Ultra-high resolution field emission SEM.
Designed for challenging samples.

- Breakthrough resolving power
- Mechanical eucentric specimen stage
- High stability
- Excellent expandability with EDX detector, scanning transmission electron microscopy (STEM), cathodoluminescence detector
- Optional: Dual beam deceleration mode
  Specimen exchange loadlock
- Resolution = 0.5 nm @15 kV and 0.8 nm @1 kV







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Electron Paramagnetic Resonance

EPR

CIQTEK

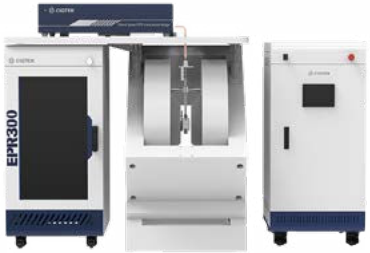


EPR200M

Compact X-Band EPR with high sensitivity & easy operation. Ideal for chemistry, catalysis, and materials research.

- Consistent performance ensures accurate results and low maintenance costs
- Manual or automatic modes for precise experiments
- Get started quickly, even for first-time users
- Fast and accurate quantitative analysis without extra reference samples
- Variable temperature system, goniometer, in-situ irradiation, and more

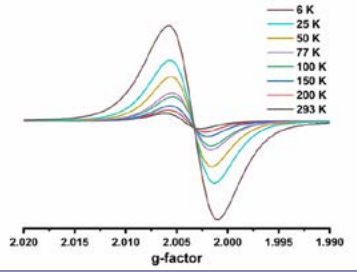
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EPR300

X-Band continuous wave EPR spectrometer. Incorporates the latest microwave technology and an ultra-high-performance signal processing unit, significantly enhancing detection sensitivity and signal-to-noise ratio to an unprecedented level.

- Enhanced Sensitivity & SNR ≥ 3,500:1
- Comprehensive functionality supporting absolute and relative quantification without standard samples
- Accommodates *in situ* experiments (*e.g.*, light irradiation, temperature variation, electrolysis), and offers automated experiments (*e.g.*, auto-tuning, automated goniometer)
- Q-Band expansion with the optional 1.8 T magnet
- Optional ultra-high signal-to-noise ratio module
- Optional transient EPR module offers nanosecond-level time resolution
- Integrated AI-driven spectrum analysis that drastically accelerates processing



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Nuclear Magnetic Resonance

CIQTEK

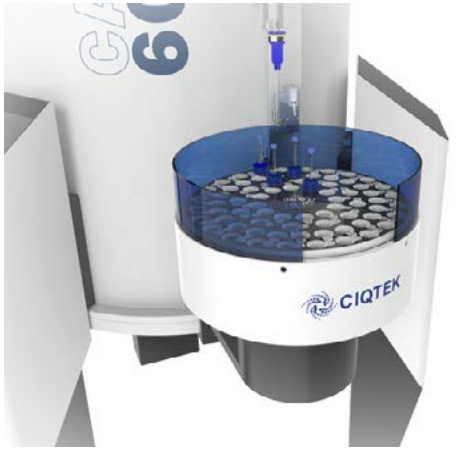
NMR



CAN600

Next-generation intelligent liquid-state NMR spectrometer.

- Low-consumption, ultra-high homogeneity, ultra-shielded 600 MHz superconducting magnet
- High-sensitivity auto-tuning probe
- 72-position automatic sample changer for rapid sample exchange and bi-directional rotation of the sample reservoir
- Intelligent control touchscreen enables instrument status monitoring and sample control. No need for a PC, keyboard, or mouse
- Smart software enables remote spectrometer power control and real-time monitoring of experiments and system status
- Modernization/upgrade solutions





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