



SciAps

a powerful
combination

Revontium

Revolutionary XRF, right on your bench

Performance on par with 1kW WDXRF in a compact design.



Revontium redefines what's possible with EDXRF

Traditional energy-dispersive X-ray fluorescence (EDXRF) analysis forces labs to choose between speed and accuracy. Instead of the instrument serving the needs of the lab, the lab works around the instrument. Samples pile up waiting for a full run. Less accurate data is accepted to speed up decision-making.

The hidden costs of these compromises add up quickly - but they don't have to.

Introducing Revontium: the next-generation EDXRF solution engineered to adapt to your workflow - not the other way around.

Revontium delivers comparable performance to 1kW floor-standing instruments at half the cost, in a 0.4m² system that fits onto even the busiest lab table. Speed meets precision - with no trade-offs.

Stop making concessions when it comes to your elemental analysis. Experience:

- Unmatched speed, analyzing up to 20 samples/hour with 4× faster detection than traditional systems.
- Long-term reliability thanks to 5× lower drift, delivering repeatable results even in demanding environments.
- Increased productivity with our flexible tray design that handles up to 32 samples, boosting your sample capacity by at least 60%.
- An easy-to-use interface that delivers intuitive operation, enabling you to train operators in under 30 minutes.



25% lower cost of ownership, faster ROI

Cut operational costs for your analysis by over 25%.

Revontium operates in air – no acids, no gases, no chillers required, so you can forget about daily calibration and expensive consumables. With 10× lower energy consumption than ICP or floor-standing XRF systems and minimal maintenance demands, you'll see returns faster while keeping costs predictable and under control.



Fits every environment

With just a 0.4 m² footprint, Revontium delivers floor-standing performance without the large footprint. No infrastructure overhauls. No laboratory redesign. Just plug it in and start analyzing. Whether your bench space is at a premium or you're integrating into existing workflows, Revontium fits - and performs - perfectly.



Safe, simple, clean operation

Revontium is 100% safer than ICP: no acids, no accidents, no risk to your operators. Its intuitive 15-inch touchscreen and SuperQ software make operation straightforward from day one. Clean, safe, and simple - exactly how analytical chemistry should be.



Ready for unattended analysis

Load up to 32 samples and let Revontium handle the rest. 4× faster detection paired with automated batch control means you get answers while you focus elsewhere, and built-in Smart Manager intelligence monitors system health and warns you about interruptions so you can maximize uptime.

4
simultaneous
detectors for
rapid
analysis



Take a look at the XRF revolution

- 1 Handles temperatures between 10-30°C
- 2 Chi-blue coating of X-ray tube for extra spillage protection
- 3 Practical footprint of only 0.4 m²
- 4 Completely X-ray sealed for full operator protection
- 5 Spinner for more homogeneous results
- 6 Built-in computer to minimize physical footprint
- 7 Large touchscreen buttons for easy operation and quick training time
- 8 32 sample positions with 52 mm diameter
- 9 Four simultaneous detectors for fast analysis
- 10 Robot arm with camera for troubleshooting
- 11 USB and network connections
- 12 Low-noise air cooling removes worries of water spillage
- 13 Cover with over-pressure to protect samples from dust
- 14 Touchscreen that adjusts to the user's height for easy operation





Long-term reliability

5× lower drift for precision that lasts. Four simultaneous detectors and advanced stability engineering ensure repeatable, accurate results day after day - even in demanding production environments. Future-ready analysis means your investment stays valuable.

Full flexibility

Switch between sample types without missing a beat. Revontium handles virtually any XRF application - solids, liquids, powders, whatever your lab demands. The Omnian software adapts instantly to any sample type in the same batch. And when you're done with XRF analysis, use the same sample with complementary methods like ICP, AAS, or XRD.

Easy integration

Revontium slots into any environment. No special installations. No environmental controls. Just place it on your bench and start analyzing. The tube's Chi-blue coating protects against spillages and interference from dusty environments to operate in any conditions. And with intuitive SuperQ software, operators are ready to obtain reliable results in just 30 minutes of training.

Ready for the new age of elemental analysis?
Contact us today!

	Standard configuration	Optional configuration
Sample handling		
Types of samples	Powders (loose and pressed), fused beads, metals, liquids, films and slurries	
Sample size	Solids 30 - 51.5 mm diameter	
	Maximum height of 40 mm	
	Typically 10 ml of liquid or powder in a sample cup	
Sample weight	Maximum 200 g	
Sample changer	single position	XYZ changer with capacity for max 32 samples in sample holders with max 51.5 mm diameter
Spinner	0.5 rev/s during each measurement	
Camera	Color camera with light for troubleshooting by customer support engineer	
Protection against liquid spillage and dust	Air lock as first level protection	
	Dust collection device	
	Sensors for liquid samples	
	Automatic beamstop during sample loading	
	Chi-Blue coating of X-ray tube window	
	Standard configuration	Optional configuration
Technology	EDXRF	
X-ray tube		
Tube settings	Software controlled; 4 - 60 kV, 0.01 - 5 mA, max 50 W	
Types	MP own made ceramic Sharp End Window tube featuring ZETA technology, Ag anode	more anodes to come
Window	Ultra-high transmission, 50 um (Be) with Chi-Blue coating for corrosion resistance	
Operation	X-ray tube remains powered on during sample loading for long-term stability	
Tube filters (primary)	Five, software selectable (Al, Ag and Cu in different thicknesses)	
Spot sizes on sample	27 mm diameter spot size	
Detector		
Number of detectors	4	
Types	High-resolution Si drift detector (SDD30) for elemental analysis between Na and Am	
Resolution	< 145 eV @ 5.9 keV (Mn-Ka), Typically 135 eV	
Total Input count rate	> 6000 kcps @ 5.9 keV (at 50% dead time)	
Detector filter (secondary)	Thin polymer filter for improved accuracy	
Electrical		
HT generator	Max 50 W	
Main supply voltage	90 - 264 V Nominal 100 - 240V +/- 10%	
Frequency	47 - 63 Hz Nominal 50/60 Hz	
Total power consumption	400 W	
Power supply	Use UPS if clean source of power is not available.	
Atmosphere inside optical path	Standard configuration	Optional configuration
Air atmosphere	Usage: Able to detect elements between Ti and Am without the need of any consumables, for solids and liquids	
Helium atmosphere		Usage: For improved sensitivity of elements between Na and Cl, in solids and liquids
		Inlet pressure: 0.8 bar
		Gas purity: 99.996%
		Gas consumption: 0.5 l/min
Vacuum facility		Usage: For improved sensitivity of elements between Na and Am, in solid samples
		Type: dry scroll pump (no oil, less maintenance)
		Vacuum level in instrument: <1 mbar (<100 Pa)
		Vacuum pump is automatically operated via user software

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SciAps

About Malvern Panalytical

Malvern Panalytical, Micromeritics and SciAps; a powerful and highly complementary combination of market leading technologies.

We are the toolmakers for the world's most innovative companies, academic institutions, and government laboratories. Customers see the difference when they use our instruments and feel the difference when they deal with our people.

Malvern Panalytical instruments analyze the chemical, physical and structural nature of materials, from proteins to polymers and semiconductors to minerals. Our leading technologies measure particle size, shape, concentration and zeta potential, biomolecular interactions and stability, elemental concentrations and crystallographic structure.

As a powerful combination our customers have access to technology leadership and an unwavering commitment to

customer support with a 1:1 ratio of sales to applications engineers, our customers' analysis is our priority – global expertise with local support tailored to their needs and access to an extended product portfolio.

With Micromeritics, customers can also measure surface area, porosity, density, adsorption and particle activity. With SciAps, our Center of Excellence for handheld instruments, customers can also access portable X-ray fluorescence (XRF), laser-based (LIBS), and near-infrared (NIR) analyzers to measure any element in any environment.

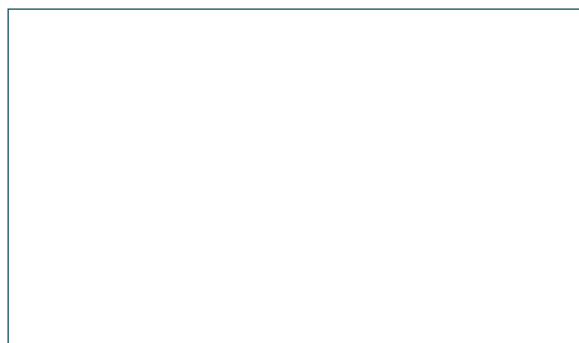
We have a global footprint with R&D and manufacturing sites in North America, Europe, and Asia. We are more than 2,500 employees in a customer-focused organization with sales and service offices in 20 countries, all committed to delivering expert and responsive customer support.

Service & Support

Malvern Panalytical provides the global training, service and support you need to continuously drive your analytical processes at the highest level. We help you increase the return on your investment, and ensure that as your analytical requirements grow, we're there to support you.

Our worldwide team of specialists adds value to your business processes by ensuring applications expertise, rapid response, and maximum instrument uptime.

- Proactive local and remote support
- Full and flexible range of service agreements
- Compliance and validation support
- Onsite or classroom-based training courses
- e-Learning training courses and web seminars
- Digital services, including MyStore and My Customer Support Portal
- Sample analysis, method development, and applications consultancy



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