



SPECTRO XEPOS

The new SPECTRO XEPOS;
Versatile XRF Spectrometer for Demanding Applications

a novel breed of high performance

X-ray fluorescence spectrometers



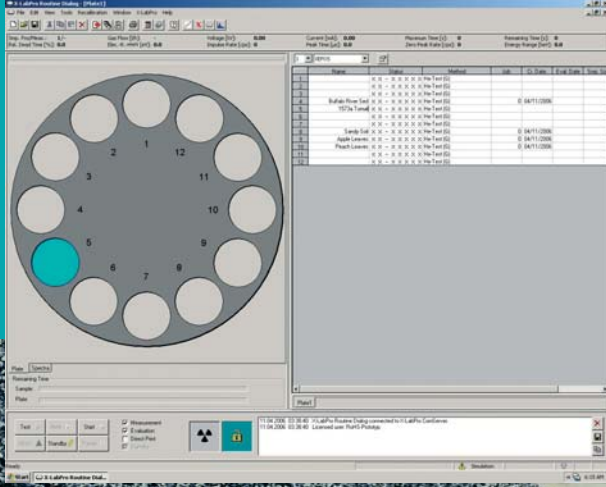
 **SPECTRO**

AMETEK[®]
MATERIALS ANALYSIS DIVISION

SPECTRO XEPOS

Versatile XRF Spectrometer for Demanding Applications

The SPECTRO XEPOS is equipped with a 12 position autosampler.



Don't be fooled by its small size: hidden inside are powerful components delivering new levels of sensitivity and accuracy. Optimum excitation using polarization and secondary targets, an autosampler for up to 12 items, preinstalled application packages and intelligent software modules, make the SPECTRO XEPOS the most versatile element analyzer available.

Excitation

The SPECTRO XEPOS uses a 50 Watt Pd end-window tube to excite the samples. The target changer, with up to 8 polarization and secondary targets, offers many different excitation conditions ensuring optimum determination of all elements from Na to U. A shutter improves the stability of the system by enabling the sample to be changed without having to turn off the X-ray tube. Combined with the uninterruptible power supply (UPS) that compensates for power fluctuations, it provides long-term stability and consistent X-ray tube performance. Measurements can be conducted in a He gas atmosphere or in a vacuum; many applications even in air.

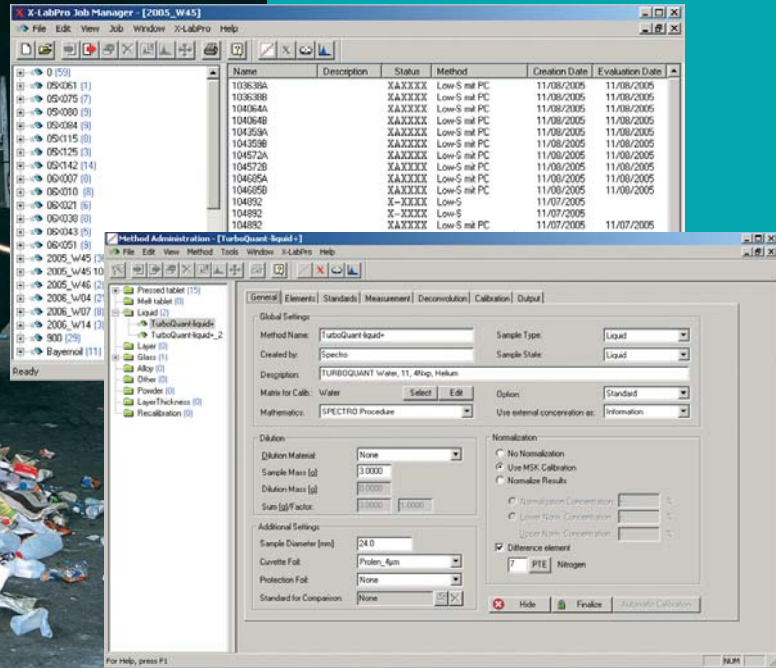
Detector

The detector is a state-of-the-art silicon drift detector. The resolution remains stable, regardless of the count rate. Internal collimators greatly improve the signal/noise ratio. A spectral resolution of less than 160 eV for Mn K-alpha is achieved. The maximum count rate is 120,000 cps. The high spectral resolution at high count rates results in reduced measuring times and improved measurement accuracy.

Sample Presentation

Not only powerful analytical components, but also exact sample presentation is critical for exceptional analytical performance. This was a special consideration during development of the SPECTRO XEPOS. The precision of the sample changer and a new generation of sample trays dramatically reduce the effects of

mechanical and physical fluctuations; improving analytical results. The analyzer can handle samples with diameters of 32 mm, 40 mm and 52 mm. The sample chamber can be equipped with a sample spinner for 40 mm sample cups to further improve the measurement results for inhomogeneous samples or irregular surfaces.



SPECTRO XEPOS

- Extreme sensitivity for light, medium and heavy elements from Na to U
- High precision autosampler with sample trays for various sample diameters
- Fundamental parameters and TurboQuant methods
- Intuitive software includes a method wizard

*Job Manager; an archive for analysis results and measurement spectra.
Method Manager: Clearly structured administration of analytical methods.*

Software

The SPECTRO XEPOS software offers a clear and easy-to-use interface to the instrument. The measurement can begin after selecting the method and entering the sample identification information. A comprehensive method assistant leads the operator through five simple steps to new, customer-specific methods. The fundamental parameters method – that functions without standards – or one of the special SPECTRO TurboQuant methods is available for the effortless analysis of unknown samples.

The SPECTRO XEPOS can be delivered with pre-installed application packages. The application packages are a combination of hardware and analytical methods; installed in the factory and individually tuned. The range of applications includes, among others: The analysis of waste, soils, sewage sludge, additives in oil, cement, slag, refractories and electronic components and parts in compliance with RoHS, making the SPECTRO XEPOS a true multi-talent.



Technical Specifications

- Excitation**
- X-ray tube with Pd anode
 - Power max 50 W
 - Voltage max 50 kV
 - Depending on the application, up to 8 optimized polarization and secondary targets are used

- Detection system**
- SDD with Peltier cooling ($\leq -25^{\circ}\text{C} / -13^{\circ}\text{F}$)
 - Large active detector area
 - 8 μm Moxtek Dura-Be Window
 - Stable peak positions and spectral resolution up to an input count rate of 120 kcps
 - Peak to background ratio at Mn K α -Linie > 5000:1
 - Spectral resolution (FWHM) at Mn K α ≤ 160 eV

- Sample handling**
- Sample tray with 12 positions for samples with diameters of 32 or 40 mm
 - Analysis in He atmosphere or optional in vacuum

- Personal computer**
- External Pentium-based computer system
 - Windows operating system
 - Keyboard and mouse
 - Monitor
 - Printer

- Software**
- Menu-based X-LAB Pro software for control of spectrometer functions and for evaluation of data

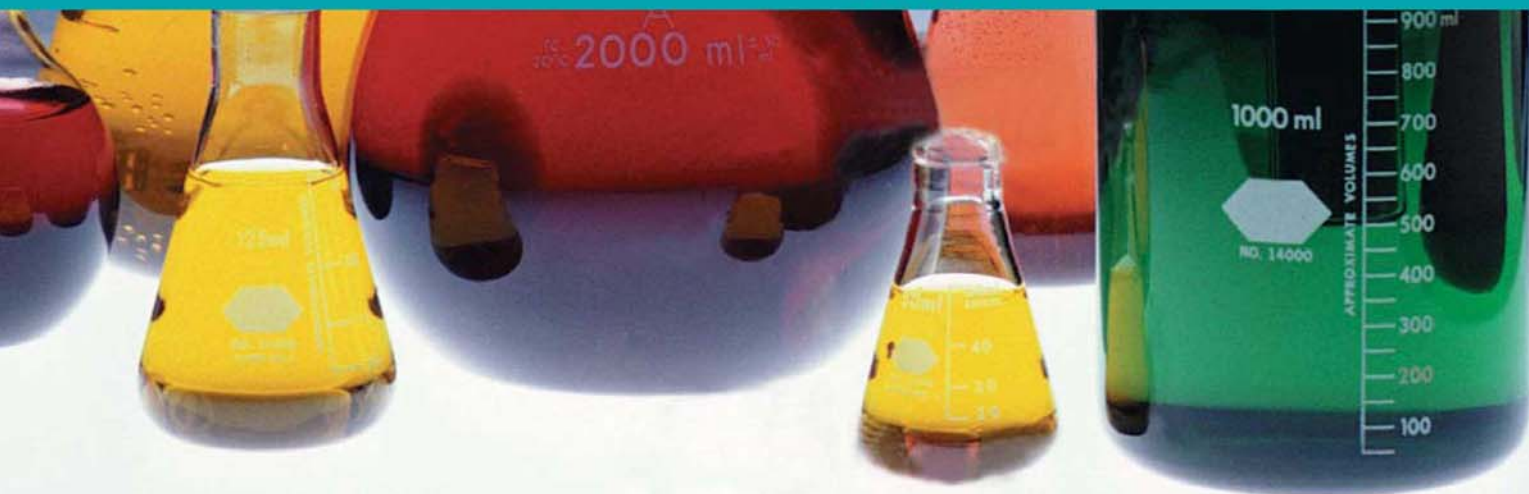
- Application packages**
- Optional TurboQuant screening methods for solids, powders and liquids
 - Optional fundamental parameters method
 - Optional packages for various applications

- Spectrometer data**
- Nominal input voltage: 120V/230V AC $\pm 10\%$, 50/60 Hz
 - Optional UPS to achieve optimal operating conditions (also in case of a breakdown in voltage)
 - Dimensions WxDxH: 650 x 750 x 400 mm (25.6" x 29.5" x 15.7")

- Weight: 80 kg (176 lbs.)
- Full protection in accordance with the German X-ray Regulations

- Environment conditions**
- Ambient temperature: 10-30°C / 50-85°F
 - Specified instrument performance at 20-25°C / 68-77°F
 - Rel. humidity at 25°C (77°F): 10-80 % not condensed
 - Free of corrosive vapour and high dust pollution

- Options**
- Sample tray with 9 positions for samples with a diameter of 40 mm in combination with sample spinner
 - Sample holder with 1 position each for samples with diameter 32, 40 and 52 mm
 - Vacuum system
 - TurboQuant-screening methods for solids, powders and liquids
 - Fundamental parameters method
 - Packages for various applications
 - UPS



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