Xenemetrix

The Power to Change Energy Into Information

EX-6600 AFM

Laboratory ED-XRF Spectrometers for Sensitive Analysis of Particulate Matter Collected on Air Filter Samples.

Air filter analyzer designed in consultation with the US-EPA office of research and development, the EX-6600 AFM energy dispersive X-ray fluorescence spectrometry (ED-XRF) spectrometer is the fastest, most accurate instrument available for sensitive analysis of particulate matter collected on air filter.

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EX-6600 AFM

The EX-6600 AFM analyzer can test for inorganic air pollutant species while supporting compliance with the US-EPA's air quality regulation requirements. Along with the power to quantify the deposits of airborne particulates up to 60 elements, the EX-6600 AFM is fast, accurate, easy to use, and achieves low detection limits. With the ability to analyze filters "as received" without destruction and with no preparation or extraneous handling, the instrument ensure that the air filter sample can be preserved for future reference.

The innovative EX-6600 AFM analyzer uses patented Wide Angle Geometry (WAG™) option to provide high x-ray flux, leading to optimal excitation of samples. Through the use of secondary targets with computer varied voltages and emission currents, the EX-6600 AFM provide monochromatic excitation energy, increased single-to-noise ratio, superior sensitivity, selective excitation of elements of interest, and extremely low detection limits, due to the near absence of background radiation.

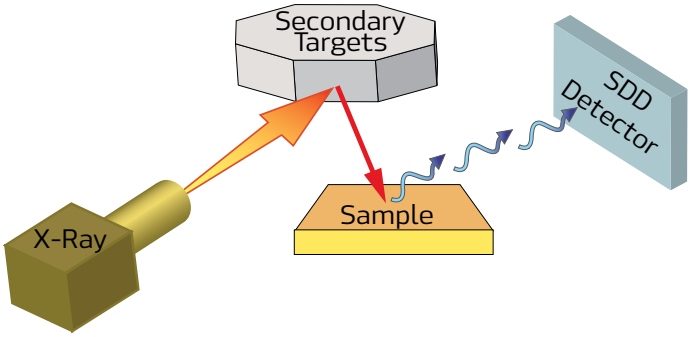
Secondary Target

The EX-6600 AFM have a unique patented geometry combining eight secondary targets, with eight customizable tube filters used in direct excitation mode, to allow optimal excitation of all elements that can be detected in EDXRF.

The WAG (Wide Angle Geometry) patented secondary target technique provides the best results for major, minor and trace element analysis.

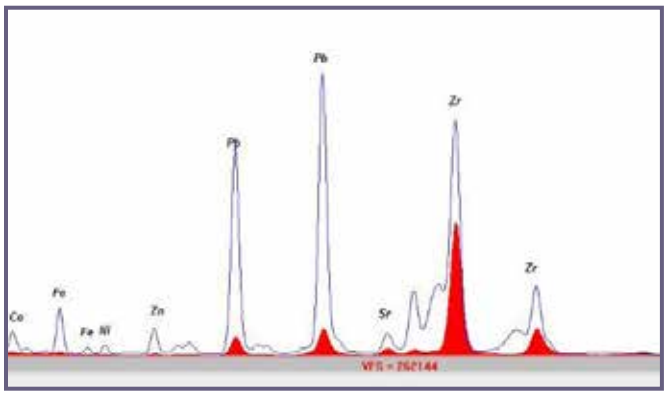
The X-ray tube excites the characteristic K lines of a secondary target (a pure metal) which are used to excite the sample "monochromatically". By using secondary targets, the detection limits for variety of elements can be lowered significantly

These low detection limits make the EX-6600 AFM suitable for a larger range variety of applications, and in particular for air filter, that had previously not been accessible to conventional ED-XRF instruments, and turn this instrument into the most versatile elemental analyzer available.



Secondary target versus direct excitation mode (example):

The figure shows the improvement peak to background ratio, when using secondary target excitation (see blue contour spectrum) versus using direct excitation mode (see main red spectrum).



System Specifications

Product Details	EX-6600AFM Secondary Target Laboratory Analyzer for Air Filter Analysis
Description	Laboratory EDXRF Analyzer 60kV, 400Watt, eight primary x-ray tube filters and eight secondary targets
Series	EX-6600- Laboratory Spectrometers
Model	EX-6600AFM Secondary Target Laboratory EDXRF Analyzer for Air Filter Analysis
Intended Applications	Analysis of fine particles collected on Air Filters for elements F(9) -Fm(100)
X-Ray Source	60kV, 400W, Rh Anode
Anode Options	Pd, Mo, Ag, W
HV Power Supply	60kV, 6700 A
Power Supply	115 VAC/60 Hz or 230 VAC/50 Hz
Controller	Standard
Filter/Collimator Series	Open,1mm Collimator, Ti, Fe, Cu, Mo, Rh, W
Secondary Targets	Eight software selectable: Si, Ti, Fe, Zn, Ge, Zr, Mo & Sn
Detector	129eV +/- 5eV Fast SDD Detector
Detector Window	Light Element Window
Counting Electronics	Digital Pulse Processing (ADPP)
Sample Presentation System	8 squared position for air filters (51 mm x 51 mm)
Safety System	Standard Xenemetrix - Lid Microswitches and X-Ray ON Light
Helium/Vacuum Purge	Helium Purge and Vacuum Capable including valves fittings, hoses, and He flow meter
Computer	Integrated PC
Operating Software	nEXt™ analysis package, running under Microsoft Windows™ OS + basic Fundamental Parameters. Specifically designed to handle fine particulate matter.
Control	Automatic control of excitation, detection, sample handling and data processing
Spectrum Processing	Automatic escape peak and background removal. Automatic peak deconvolution. Graphical statistics
Quantitative Analysis Algorithms	Multi-element regression with inter-element corrections (six models available). Gross, net, fit and digital filter intensity methods
Reporting	User-customizable data print out

Low Detection Limits & High Throughput

Several unique features of the EX-6600 AFM that make it ideally suited for air filter analysis include:

- Close-coupled optics in the secondary target mode allow for greater flux and superior sensitivity.
- Customized software for air filters utilizes stringent algorithms to closely model the background and provide accurate net peak data.
- A choice of eight different x-ray tube filters
- A choice of eight customizable secondary targets in the secondary excitation mode.
- Ultra thin detector window provides superior performance for low Z elements.

Xenemetrix

Worldwide Distributions:

North America, Latin America, Europe, Asia, Australia, Africa & Middle East

Xenemetrix is a leading designer, manufacturer and marketer of Energy-Dispersive X-Ray Fluorescence (EDXRF) systems. With more than 30 years experience, Xenemetrix continues to develop highly innovative technologies and solutions suitable for today's ever-growing analytical challenges. Xenemetrix combines the latest technological developments with innovative engineering, to provide cost-effective solutions to a wide range of industries and applications.

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