KORE TECHNOLOGY

SurfaceSeer S

Providing high sensitivity surface analysis.

Mass resolution >2500 m/δm

Sensitivity >1x10^9 atoms/cm^2

Mass accuracy ±5 milli amu

Affordable TOF-SIMS technology

Compact

Positive and negative SIMS

The Kore SurfaceSeer S is designed to be an affordable workhorse of the TOF-SIMS (time-of-flight secondary ion mass spectrometer) range. It is ideal for investigating the chemical composition of sample surfaces and is equally at home in R&D or industrial quality control applications.

Kore Technology: At the heart of innovative analysis

The instrument uses a 5keV Cs^+ ion beam (optionally inert gas Ar^+) that is pulsed to minimise the surface damage that would otherwise be caused by a continuous ion beam. The gun pulses on for only 60ns in every 100µs TOF cycle, and thus the primary beam delivers more than 1,000 times less current than if it were on continuously. A typical experiment time of 10s delivers a dose equivalent to only a few milliseconds of continuous beam current. Several minutes of analysis in a single spot would be required to reach the so called "Static SIMS" limit, the point at which surface damage becomes clearly visible in the data (focus and beam-current dependent). Despite the low ion doses, the TOF analyser is very efficient, and this accounts for the high secondary ion data rates (typically 5000 c/s even on relatively low ion yield polymers).

SURFACESEER S APPLICATIONS:

Surface chemistry
Adhesion
Delamination
Printability
Surface modification
Plasma treatment
Trace analysis (ppm in surfaces)
Catalysis
Isotopic analysis
Surface contamination

FULL SPECIFICATION

Very high surface sensitivity	$1x10^9$ atoms/cm^2 (ppm)
Mass resolution	>2,500 m/δm (FWHM)
Mass range	>1000 amu Mass range to 10,000 amu with high mass detector (option)
Mass accuracy	± 5 milli amu
Analysis area	100µm to 1000µm
SIMS	Positive and negative modes
Low energy electron gun for charge compensation of insulators	
Elemental and molecular information from surfaces	
Isotopic analysis	
Conducting and insulating sample analysis	
Sputter cleaning capability	
1 minute analysis	
5 minute sample pump down from atmosphere	
SIMS data libraries available	
Optional optical microscope/camera/monitor	

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