

SurfaceSeer

Surface chemistry analysis by time-of-flight secondary ion mass spectrometry



- Very high surface sensitivity (1×10^9 atoms/cm²)
- Very simple to use (½ day training)
- 1 minute analysis, sample turnaround <7minutes
- Conducting and insulating surfaces
- Elemental and molecular information
- Separates common organics from elements
- Positive and Negative SIMS
- Isotope analysis
- Analysis area ~0.5 mm
- Sputter cleaning facility
- Data libraries available
- Price <£150k

Secondary ion mass spectrometry (SIMS) uses an ion beam to dislodge fragments and whole molecules from the outer few layers of a surface and then 'weighs' these secondary ions in a mass spectrometer. The mass translates relatively easily into chemical information, as each element or fragment has a characteristic mass. Even easily damaged surfaces, such as polymers can be analysed using the 'Static' SIMS mode in which the incident ion dose is so low that >99% of the time a new part of the surface is being probed. The time-of-flight mass analyser used in SurfaceSeer analyses all species simultaneously giving the sensitivity needed for low incident ion doses. Detecting all species has the additional advantage of allowing data to be retrospectively analysed

SIMS is well established in universities and the research centres of multinational companies, who typically use very expensive multi-purpose configurations, requiring Ph.D. level operators. *SurfaceSeer* restricts itself to providing static SIMS spectra quickly, simply and with high sensitivity. In doing so it brings this powerful technique within the budgets of a much wider audience.

For anyone interested in coating, printing or bonding two components together, the condition of the surface of the items is of critical importance. A single layer of PDMS molecules can ruin an adhesive bond. PolyDiMethylSiloxane is everywhere in the environment- in polish, mould release agents and in abundance on the inside of all polythene bags. Many industrial processes are concerned with the surface state, including all cleaning processes or surface activation by chemical or plasma treatments.



If you are responsible for the performance of materials that will be coated or bonded in a quality control or trouble-shooting capacity, consider contacting us to discuss the information that *SurfaceSeer* could provide in your application. Also see <http://www.kore.co.uk/surfaceseer.htm> for further information.