

SAXSess – AN ANALYTICAL TOOL FOR BIOMATERIALS

Heimo Schnablegger (Anton-Paar GmbH., Anton-Paar Str. 20, A-8054 Graz, Austria), Alexander Bergmann and Otto Glatter (University of Graz, Institute of Chemistry, Heinrichstr. 28, A-8010 Graz, Austria).

A new small-angle X-ray scattering (SAXS) instrument, SAXSess, has been introduced by the Anton-Paar GmbH, recently. It provides improved and new features that allow for the acquisition of pharmaceutically relevant information with an unprecedented quality.

It measures scattering data which can be used to determine

- (1) sizes
- (2) shapes
- (3) internal structures
- (4) surface-to-volume ratios and
- (5) the crystallinity

of nanoparticles, biomaterials and polymers. The performance of this laboratory instrument is demonstrated with the experimental results from a selection of dispersions (protein, virus, latex, inorganic material, etc.) and polymer systems that are suited to reveal the current analytical possibilities.

Other possible applications in the fields of bio-mineralization, drug-delivery systems, nanotechnology and quality control are discussed.