

On the Optimum Optical Setup for Measuring Proteins on a Laboratory Powder X-Ray Diffractometer

Beckers D.

PANalytical, Almelo, The Netherlands

The Bragg-Brentano diffractometer has been used for decades for the investigation of organic compounds as encountered, for example, in the pharmaceutical industry. In the last ten years, the introduction of new X-ray optical components and fast detection systems has widened the number of attractive configurations for laboratory X-ray diffractometers considerably. Choosing the optimum hardware for a given set of analytical problems is more difficult (and interesting!) than it was before.

In this presentation, the pros and cons of a variety of X-ray optical configurations on a powder diffractometer are discussed by comparison of different reflection and transmission geometries. An optimized set-up for measuring weakly scattering protein samples with high resolution is described.