

AUTOMATED SAXS MEASUREMENTS OF PROTEIN SOLUTIONS WITH A LABORATORY BASED SAXS SYSTEM .

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Combining the availability of a high-flux laboratory small-angle X-ray scattering (SAXS) camera employing a high-brilliance micro-beam delivery system with point-focus and automatized data evaluation software, we are developing a compact and reliable system for online and high-throughput measurements for low resolution structures of proteins in solution. During such automated SAXS measurements the radius of gyration and relative mol.wt., as well as the real-space function (distance distribution function) of the scattering curve (after buffer subtraction) are calculated in certain time-intervals and the measurements are automatically stopped if no significant changes or improvements in the real-space functions can be achieved. Additionally, a low-resolution model is calculated. First results, using the protein lysozyme as a benchmark test, will be shown.