

Support Labs at the MAX IV Synchrotron Facility

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The Bio and Chem support labs at the MAX IV synchrotron facility in Lund, Sweden, provide essential infrastructure and expertise to enable and enhance scientific research across a wide range of disciplines. These labs serve as central facilities for sample preparation, characterization, and handling, supporting visiting scientists in their experiments at the synchrotron. The Biolab focuses on biological and biochemical samples, such as proteins, nucleic acids, lipids, and macromolecular complexes, and offers specialized equipment including dynamic and static light scattering, gel electrophoresis, UV/Vis spectrometry, chromatography, and optical microscopy. The Chem labs complement this by providing capabilities for handling chemical samples, including harsh chemicals, and supporting research in environmental science, materials, and catalysis.

The support labs play a critical role in optimizing samples for synchrotron experiments and developing new experimental methods. Collaborations with beamline staff and user communities have led to advancements in areas such as serial crystallography, microfluidic platforms, and sample environments. For example, the Biolab hosts an offline test station for a microfluidic setup used in innovative in situ and time-resolved experiments, as well as a station for testing injector systems for serial crystallography.

Guided by a strategic vision, the Bio and Chem support labs aim to provide exceptional service and maintain state-of-the-art facilities. They work closely with beamlines to optimize workflows and continuously adapt to the evolving needs of synchrotron research. By offering specialized equipment, technical expertise, and innovative solutions, the support labs at MAX IV are integral to enabling groundbreaking research in life sciences, chemistry, and materials science. In this poster, the labs and selected user cases will be showcased to highlight their impact on synchrotron-based research.