


Advanced service crystallography



ANSTO's Australian Synchrotron, located in Clayton, Victoria, has two beamlines dedicated to macromolecular and chemical crystallography - MX1 and MX2.

Expert beamline team, highly skilled in single crystal diffraction data collection and structure determination

Experimentally-verified test data providing daily calibration benchmarks with ISO 9001 certification

Customised service designed to exceed client expectations.

Service offering

Full service crystallography upon receipt of samples

Remote access to all beamline functions can be discussed

Robot and software automation, key to delivering fast, reliable results and easy-access

Significant beamtime dedicated to high-throughput, fragment-based drug design research

High-flux MX2 micro-focus beamline for determination of challenging

structures including crystals from viral and membrane proteins between 1 and 30 microns

Technical capabilities

MX1

High-throughput, high-flux beamline using a bending magnet source

Beam size at the sample of 150 x 120 μ m (FWHM, HxV)

Ideal for crystalline samples of >100 μ m or other highly-diffracting samples not requiring the flux of an undulator beam

Changeable energy: 9.0keV (1.38 \AA) to 17.5keV (0.71 \AA)

MX2

Micro crystallography (micro-focus) beamline using a very high flux undulator source

Beam size at the sample of 20 x 12 μ m (FWHM, HxV)

Ideal for crystalline samples of <50 μ m or other poorly diffracting samples requiring the additional available flux

Beams of 20 x 20 μ m and 10 x 10 μ m available using a micro collimator

Changeable energy: 9.0keV (1.38 \AA) to 15.5keV (0.80 \AA)

MX1 and MX2 features

SAM-style sample-loading robot that accepts both SSRL cassettes and unipuck pin holders, with fast crystal mounting

Fast crystal centring using X-ray diffraction (rastering)

Automatic data reduction using XDS, with real time data indexing and automatic structure solution with AutoRickshaw

Temperature control at the sample position between 100 and 400K

Xe derivatisation and UV laser phasing

For further information visit www.ansto.gov.au/mxbeamline

ANSTO LOCATIONS

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