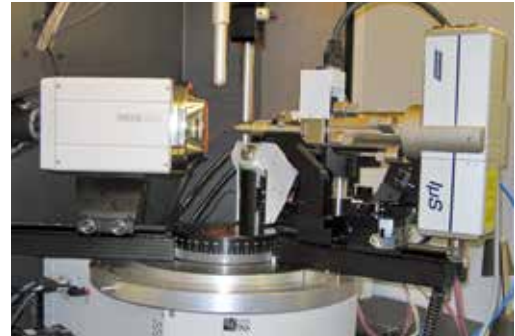


Incoatec Application Lab

Incoatec Microfocus X-ray Source $1\mu\text{S}$



The incoatec headquarter



CCD-detector System: Bruker Smart Apex II



Image Plate System: mardt mar 345

When Incoatec started developing the Incoatec Microfocus Source $1\mu\text{S}$ its broad field of application led to the desire of having a place, where customers would be able to convince themselves of the performance of the $1\mu\text{S}$. A place where the $1\mu\text{S}$ would not be shown in the latest Bruker AXS Goniometers, but where the customer could see, how an upgrade of equipment would perform: the Incoatec Application Lab was born.

With our $1\mu\text{S}$ for Cu, Mo, Ag, Cr or Co the following samples and applications can be measured on two different set-ups.

- Single crystals
- Macromolecules
- Small molecules
- Inorganic materials
- Small Angle X-ray scattering
- Texture
- Powder
- Phase identification
- Stress

AppLab Set-up 1

Bruker Smart Apex II

- 3-circle goniometer with Apex II and Smart6000 CCD detector
- μ S with 2D focusing Quazar multilayer mirrors
- Cu, Mo and Ag radiation readily available
- Oxford Cryosystems Cryostream cooler (for low-temperature measurements)
- for single-crystal diffraction experiments on proteins, small molecules, ...
- for powder diffraction experiments in transmission (capillaries, thin samples)
- software: Apex Suite, Saint, Shelx Suite, Fit2D, GADDS Suite, Powder3DIP



AppLab Set-up 2

mardt with mar345

- 2-circle goniometer with mar345 IP detector
- μ S with 2D focusing or collimating Quazar multilayer mirrors
- Cu, Mo and Ag radiation readily available
- Oxford Cryosystems Cryostream cooler for single-crystal diffraction experiments on proteins, small molecules, ...
- for XRD in transmission geometry
- software for data evaluation: Automar, mosflm, CCP4 Suite, Fit2D, Powder3DIP



The μ S has proved its performance to customers in numerous demo measurements. Our versatile instrument set-ups have enabled our application scientists to present high quality data and fascinating results at several conferences on crystallography world-wide. Various scientists have taken the opportunity to make use of the flexibility our Application Lab offers, e.g. by bringing their equipment for non-ambient environments with them, like high pressure cells, heating units, ...

But not only experimental performance can be shown here, the reliability of the μ S can also be proved: Experiments with Cu-radiation are still carried out with Prototype No.1, which has been running without significant loss of intensity since 2005.

Application Scientists

Dr. Jürgen Graf is responsible for applications in single crystal diffraction on proteins and small molecules. He has over ten years of experience in service crystallography.



Dr. Bernd Hasse is responsible for applications with powders and materials. Before joining Incoatec he worked as a beamline scientist at the synchrotron Hasylab at DESY in Hamburg.



Location

Incoatec GmbH is located in the „Geesthachter Innovation and Technology Center“ (GITZ) situated on the grounds of the HZG Research Center about 30 km south-east of Hamburg.

Incoatec is less than an hour's car drive away from the world famous Synchrotron facility in Hamburg - the HASYLAB.

