THE VERSATILITY OF THE INCOATEC MICROFOCUS SOURCE

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The incoatec microfocus source IµS is a low power air cooled X-ray source for diffractometry applications. It is now available with Cr, Co, Cu, Mo, and Ag anode. The source is equipped with a two dimensional beam shaping multilayer optics. Therefore we can form either a highly collimated beam with a low divergence (below 1 mrad) or a focussing beam with higher divergence (up to 10 mrad).

Cr and Co Systems are used for materials characterization, especially of iron containing samples. In this case fluorescence radiation is not excited. Both, collimating and focussing optics are useful for such measurements.

The Cu-IµS is the most versatile IµS. Equipped with a collimating optics it can be used for SAXS, GISAXS or X-ray diffractometry in reflection geometry. When using a focussing optics also SAXS and GISAXS experiments are possible as well as X-ray diffractometry in transmission geometry and single crystal diffractometry of biological samples.

With the Mo-IµS higher absorbing materials can be investigated. This source is often used for single crystal diffractometry in the chemical crystallography.

Ag radiation is useful for electron density studies on single crystals and for measurements in reaction or pressure cells. Having a limiting exit aperture more signals can be obtained due to the short wavelength of the radiation.

We will show possible applications and integration into existing instrumentation for all of the above mentioned sources.