SS02-3 **Introduction of Powder X-ray Diffraction at SPring-8 BL19B2**

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SPring-8 BL19B2 is established for industrial users (Imaging, thin-layer diffraction, powder diffraction, small angle scattering etc) with 3 individual experimental hutches. Especially, powder diffraction on inorganic compounds has been widely useful in material production companies and there have been large amount of experimenters in SPring-8.From several years ago, there are some successful results in structure determination from powder diffraction of pharmaceutical compounds at SPring-8.

The basic component of powder diffraction facility is a large debye-scherre camera with camera distance 286.5mm and an imaging plate. Continuous 30 individual diffraction data is collected on one imaging. To achieve efficient data measurement with large amount of powder samples, we have developed the automatically centering and mounting/changing systems for the powder diffractometer named JukeBox.

Furthermore, to measure phase transition and dehydration in pharmaceutical compounds, systematically temperature dependent data collection are now set with Juke Box system.

Following the field in protein crystallography and XAFS, the commercial mail-in service in powder diffraction has started in January 2010.