

W0103

Increasing Crystallization Trials Productivity through Imaging Automation. Pierre Le Magueres¹, Eric Hnath¹, Jian Xu², ¹Rigaku Americas, 9009 New Trails Dr., The Woodlands, TX 77381, Rigaku Automation Group, 5999 Avenida Encinas, Suite 150, Carlsbad, CA 92008.

The Minstrel I crystal imaging platform from Rigaku, consisting of a Minstrel I imager, a plate hotel and the database CrystalTrak, is designed to automate the process of recording, tracking and optimizing a vast number of protein crystallization trials.

The Minstrel I captures high quality images of crystallization drops from most commercial crystallization plates due to a flexible and upgradeable plate type library. The possibility to manually select different light patterns and polarized light filters further aids the identification of such critical features as crystalline precipitate, phase separation and crystals down to a size of a few microns.

Linked to a plate hotel with up to 160 SBS-type plates, and combined with the CrystalTrak database, the Minstrel I imaging system allows crystallographers to frequently image crystallization trials and electronically record relevant of data. Thanks to the option in CrystalTrak to automatically optimize crystallization conditions, the platform (Minstrel I + plate hotel + CrystalTrak) represents a solution for increasing crystallization trial productivity, and thus reduce the amount of time in obtaining crystals suitable for X-ray diffraction.