

Poster Presentations

[MS39-P03] mosquito® Crystal and mosquito® LCP: fast, reliable automation of Protein Crystallisation drop set-up

Joby Jenkins, David Smith

TTP Labtech, Melbourn Science Park, Melbourn, Royston, Herts, SG8 6EE

E-mail: joby.jenkins@ttplabtech.com

The automation of protein crystallography screening has contributed significantly to the rapid progress of crystallography-based structural biology offering increased throughput and accuracy, with the ability to use smaller volumes of both protein and screen solutions, thereby saving valuable protein and reducing reagent costs. Automation of protein crystallisation trials set-up requires accurate placement of nanolitre volumes of protein and screen drops, in addition to the reproducible and accurate dispensing of solutions of varying viscosities. This is particularly important for the set-up of the highly viscous lipid mesophases in the LCP crystallisation technique for membrane protein crystallisation trials. This poster discusses demonstrates the ability of TTP Labtech's mosquito® Crystal and mosquito® LCP to address the issues of the set-up of automated protein crystallisation screen trials. The ability to automate both micro batch and vapour diffusion methods of protein crystallography (sitting drop, hanging drop) without instrument configuration change offers significant flexibility for the crystallography laboratory. mosquito LCP offers all the advantages of mosquito Crystal but with the addition of a dedicated microsyringe dispenser for accurate dispensing of nanolitre volumes of the highly viscous cubic phase. mosquito Crystal and mosquito LCP offers fast throughput, high precision and unrivalled reproducibility.

Keywords: Microbatch, Vapour diffusion, LCP