

## Crystallisation Jobs: Requirements and Service

**Two weeks notice of jobs is required as the crystallization officer is part-time (i.e. Thursday and Friday).**

### Protein Requirements

Protein is to be provided in purified form, at a concentration of 20 mg/mL. A minimum volume of 16  $\mu$ L is required to set up 1 x 96-well screening plate. An FPLC SEC trace and PAGE gel image of the sample must be provided. If the sample is not sufficiently homogeneous, or if a gel and a SEC trace is not provided, the protein will not be accepted.

### Services provided

#### (1) Solubility test.

To ensure protein is at a reasonable concentration, a solubility test can be performed using two common crystallization precipitants, and observing precipitation over a period of 2 h. Protein concentration will be estimated using A280.

COST: \$50

Yes/No

NOTE: If the protein is too dilute, the sample will be concentrated at the client's expense.

COST: \$50

#### (2) Set protein in COMMERCIAL crystallization screens

Eight commercial screens are available in UQ ROCX for initial screening. The protein will be set in 200 nL drops made from 100 nL of the protein solution and 100 nL of the well solution. The plates will then be stored and imaged in the RockImager for 3 weeks. Crystallisation screens can be set at two temperatures, 20°C and 8 °C.

COST: \$100 for initial plate  
(\$80 for each additional plate set up at the same time)

Yes/No

#### (3) Set protein in CUSTOM (shallow grid) crystallization screens

To optimize crystals found in initial screening or to use a literature crystallization condition, the protein is set in a focused crystal screen that is prepared in-house.

COST: \$150 per plate  
(additional plates using the same reagents \$100)

Yes/No

#### **(4) Inspect and Score crystallization plates**

The crystallization plates are automatically imaged over three weeks. During this time the images can be inspected by the crystallization officer and outcomes scored for three separate imaging times (e.g. days 3, 8, and 21).

COST: \$50 per plate

Yes/No

#### **(5) Report**

At the end of three weeks, a two-page report can be prepared that outlines the experiments performed, analyses the outcomes and suggests the next steps.

COST: \$100

Yes/No