

Removal of excess liquid surrounding the crystal(s)

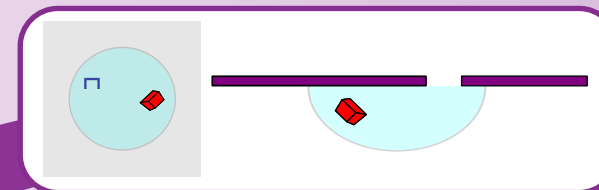
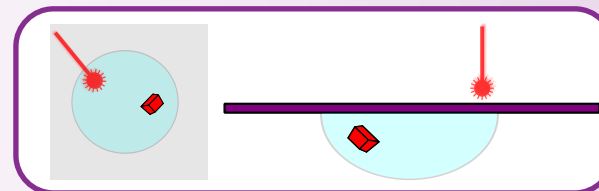
The mother liquor in excess provokes undesired X-ray background. To limit this phenomenon, CrystalDirect[®] cuts an aperture in the crystallization support membran and, then, aspirates the surrounding liquid.

The membrane is cut by laser photoablation around selected crystal(s)

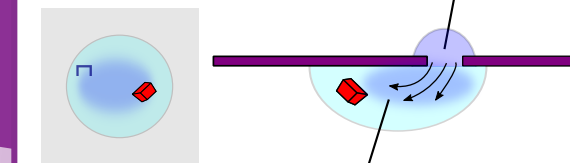
The user selects a cutting shap adapted to the shape and orientation of the crystal(s): CrystalDirect[®] will cut the membrane as set by the user. Then, the crystals are fixed on the sample pin which harvests them.

The harvested crystal(s) are immediately placed in the cryo-flux

The cryo-preservation process is automatic : the integrated cryo-nozzle generates a cryo-flux in which crystals are maintained until they are recovered either by a sample changer robot or manually.

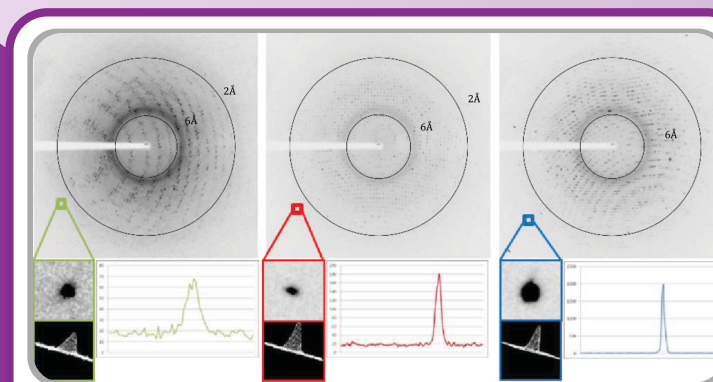
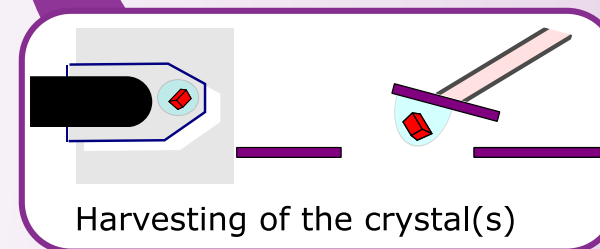
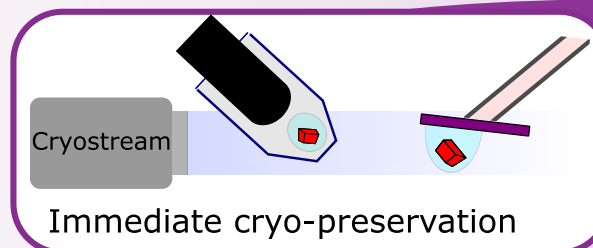


Optional step:
Drop of cryo-protectant and/or a chemical agent chosen by the user.



Diffusion into the mother liquor: reduced osmotic shock, no need to match the crystallization conditions.

Recovery of the harvested crystal(s)



X-ray diffraction analysis of crystals of proteinase K (left), thaumatin (middle) and lysozyme (right).

X-ray diffraction images show:

- Complete absence of ice rings
- Reflections extending to high resolution
- Crystallographic statistics comparable to standard manual methods

Sample pin positioning
Second laser cut for harvesting

