



THE TECHNOLOGY

A method for manipulating and mounting crystals for X-ray crystallography and structure determination, consisting of a microfabricated plastic film attached to a cylindrical post. This same basic geometry can be used to make a variety of tools useful for manipulating small, delicate samples such as macromolecular crystals in operations such as seeding, crystal transfer between solutions, and crystal retrieval from growth drops.

Macromolecular crystals are extremely fragile and are easily destroyed by incidental contact with hard objects. They often adhere to the glass slides or containers in which they are grown and are difficult to remove. They often grow together in clusters, so that a crystal must be pried or cut away from the cluster in order to use it in X-ray diffraction studies.

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THE PRODUCT

MicroTools™

These tools are designed for use with samples from a few micrometers to a millimeter in size. Unlike other microtools, Mitegen's patent-pending MicroTools[™] have tips made from soft, flexible microfabricated polymer films. The curvature of the tips gives them rigidity, but they can still easily be flexed to, e.g., slide flat along the well bottom in a multiwell plate, simplifying sample retrieval. These tools are far less likely to damage fragile samples than metal microtools, and are optically and X-ray transparent. They are well suited for use with protein crystals, single cells and other small samples.