Crystal Growth

MiTeGen

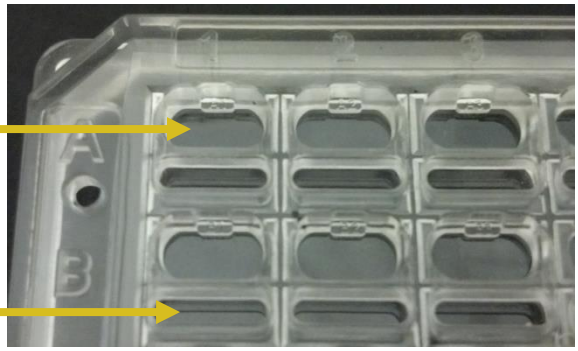
In-Situ-01™ Crystallization Plate

PRODUCT HIGHLIGHTS:

- Low Profile 96-well SBS format
- Screening or Optimization
- Used as Sitting or Hanging Drop
- Highly UV and X-ray Transparent
- Optimized for *in-situ* X-ray screening
- Low birefringence
- Ideal for transporting crystals

Protein Drop Areas:
1 – 6 drops
(2 µl – 50 nl)

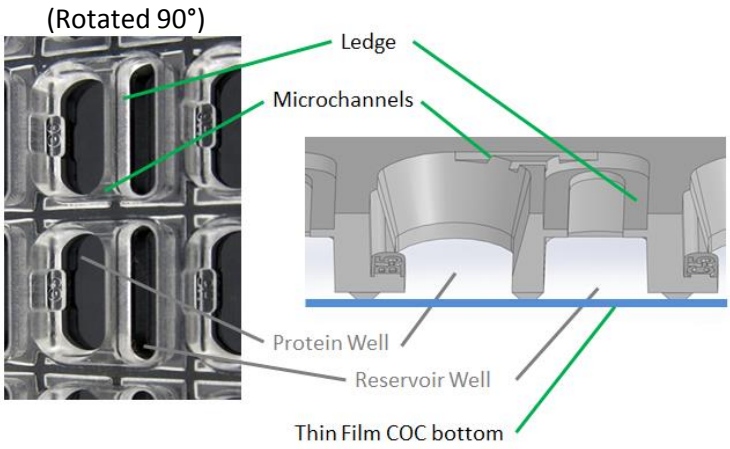
Reservoir Wells:
40 µl



Patent Pending Design Features:

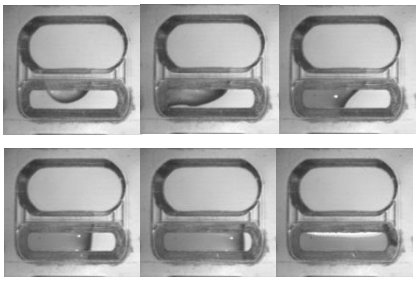
Vapor Communication Microchannels

- Allow vapor equilibration between reservoir and protein well, at the same rate as in existing plates.
- **Strongly inhibit liquid transfer** between reservoir and protein wells due to, e.g., rough handling, shipping.
- Plate can be **rotated to any orientation** without liquid transfer out of the reservoir.



Reservoir Well Liquid retention ledge

- **Prevents liquid motion** out of the well and
- Ensures **uniform well filling**, for larger reservoir volumes in a low profile plate.



Thin Film Bottom

- Ultrasonically welded thin film bottom has the lowest X-Ray diffraction and best UV transparency of any plate.

In-Situ-01™ Crystallization plate

IN-SITU PERFORMANCE:

HEWL crystals were grown in the plate and *in situ* X-ray examination was performed at CHESS. The same crystals were harvested from the plate, placed inside 10 micron-wall quartz capillaries, and again examined by X-rays.

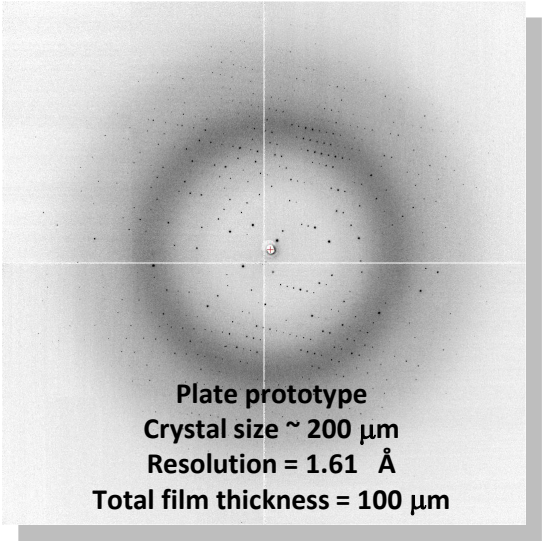
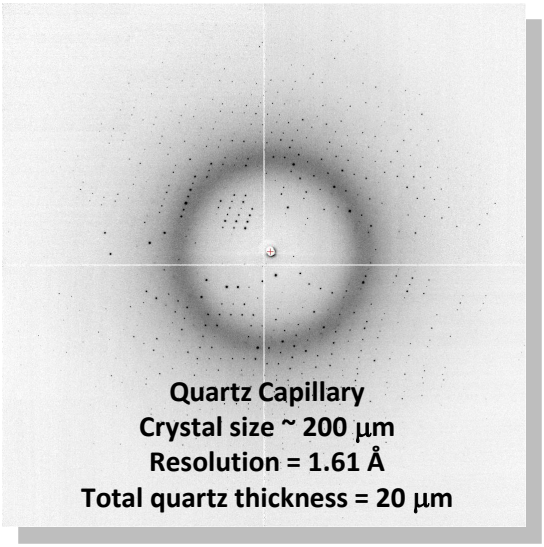


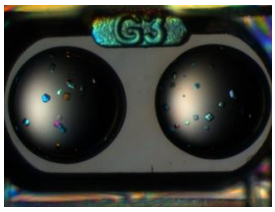
Plate prototype
Crystal size ~ 200 µm
Resolution = 1.61 Å
Total film thickness = 100 µm



Quartz Capillary
Crystal size ~ 200 µm
Resolution = 1.61 Å
Total quartz thickness = 20 µm

Versatility:

Screening or Optimization, Sitting or Hanging



Two 1 µl sitting drops (populated by hand using P2 pipette)

Six 50 nl hanging drops (populated by Labcyte's Echo Liquid Handler)

TECHNICAL SPECIFICATIONS

Frame	
Material	COC (injection molded)
Length	128 mm
Width	85 mm
Height	9.2 mm
Wells	96
Protein drops/well	Single or Multi
Protein drop size	Up to 2 µl
Reservoir volume	Up to 45 µl

Thin film bottom	
Material	COC (rolled film)
Thickness	100 µm

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