

The CrystalQuick™ X plate

The **CrystalQuick™ X** plate, produced by Greiner BioOne, is a new plate optimized for in situ screening:

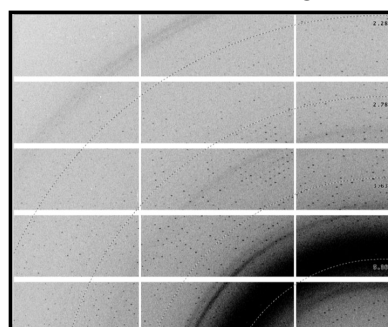
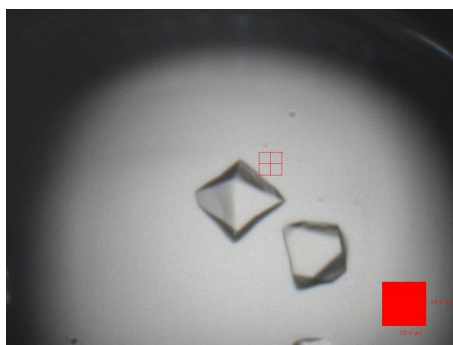
- It is a « **low profile** » plate (only 8 mm thick), so that more plates can be stored in one place.
- It is made of « **low birefringence** » COC, to allow a better UV detection.
- Its reduced thickness at the bottom of the drop (250-300 μm , instead of $\sim 1000 \mu\text{m}$ for the other commercially available plates) provides a **lower X or UV scattering**, and a higher brightness in the visible range.
- Its very open geometry enables to collect X-ray diffraction images directly in the crystallization drop, with an **angular range of 80 degrees**.
- The well geometry enables to harvest crystals more easily.
- The visual navigation under the microscope is also improved, thanks to an **individual numbering of the wells**.
- **A scale mark close to the drop** gives a quick estimate of the crystals size.

A new virus structure: Bovine enterovirus 2

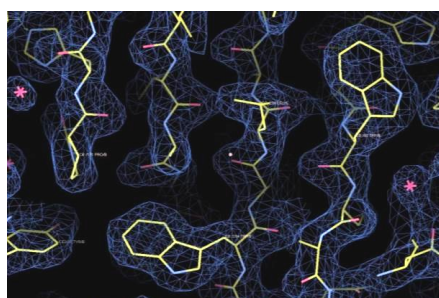
Data collected at DLS, I24 beamline

- beam size: 20 μm
- focus at detector (P6M)
- exposure time 0.1 sec, 0.1° oscillation,
- detector distance: 480 mm,
- resolution at edge of detector: 2.28 Å

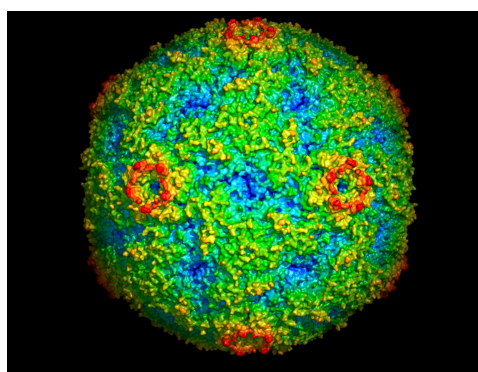
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I24, Diamond Light Source (UK)



Diffraction frame collected on I24 at DLS



2fo-fc density map at 2.2 Å resolution
R= 18%, Rfree = 19%



Screening of brominated fragments against ERK-2

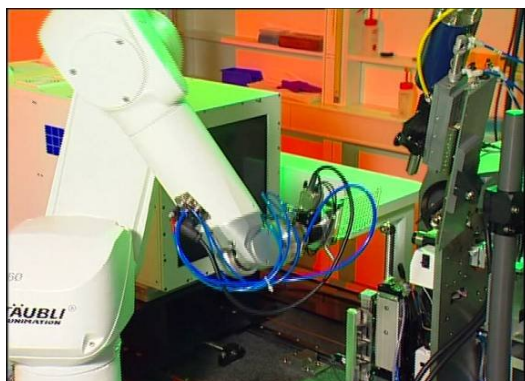
Data collection on FIP (ESRF):

- Space group: P21
- Completeness: 83%
- by merging 3 dataset (50+50+41 frames)
- Rsym: ~5.4 at 2.15 Å.

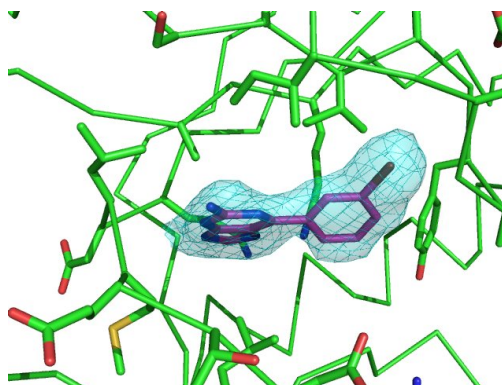
Refinement against the structure of ERK-2 with no ligand:

- R/Rfree ~ 20.4/25.5%

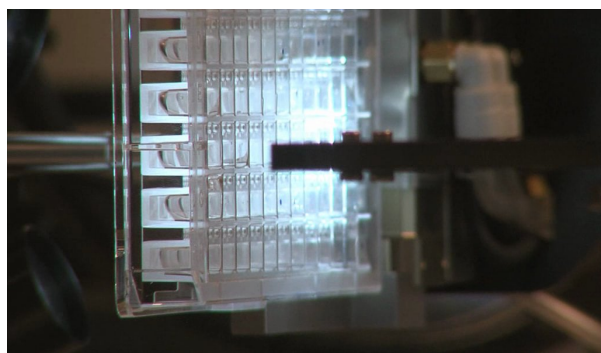
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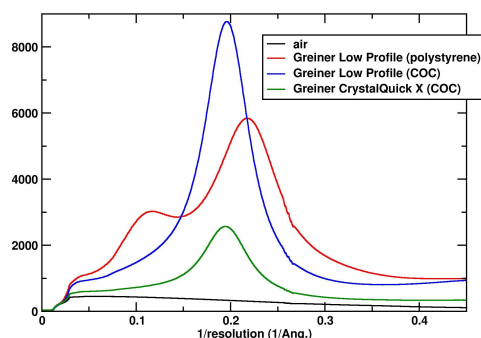
in situ screening on beamline FIP at the ESRF



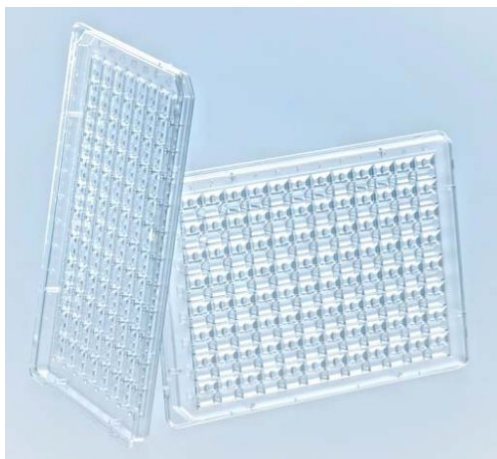
2fo-fc map at 0.9 sigma



in situ screening on "in house" G-Rob system



X-ray scattering of the CrystalQuick X plate, compared to conventional plates.



A version of the **CrystalQuick™ X** plate with a special **hydrophobic treatment** is also available for the use of **detergents**.

The **CrystalQuick™ X** plate is compatible with any crystallization robot. It is currently in use on the following: Mosquito™, Phoenix™, Griffon™, Cartesian™, and more. The needed parameters data are available upon request (also see: www.natx-ray.com/products/catalogue_consum_CSM001-Xrayplate.html).