A capillary device for growing large protein crystals

Koji Inaka^a, Sachiko Takahashi^b, Bin Yan^b, Misako Koga^b, Yoshinobu Hashizume^b, Masayuki Kamo^a, Naoki Furubayashi^a and Hiroaki Tanaka^b

^aMaruwa Foods and Biosciences Inc., 170-1 Tsutsui-cho, Yamatokoriyama, Nara 639-1123 JAPAN, crystal@maruwafoods.jp

^bConfocal Science Inc., 2-12-2 Iwamoto-cho, Chiytoda-ku, Tokyo 101-0023 JAPAN, info@confsci.co.jp

Neutron diffraction experiment is very useful¹⁾, but it is difficult to grow suitable crystals for neutron diffraction experiment because it requires much larger crystals if compared to the crystal size for X-ray crystallography (more than 1000 times in volume).

Here we introduce a capillary device especially for growing large protein crystals²⁾. The main feature is that it includes self-contained dialysis membrane which provides dialysis method in the capillary. In the poster, we will introduce the preparation methods and large crystals which grew in this device.



Figure 1. A large lysozyme crystal grown in the capillary device

References

- 1) J. D. Ng et al. Acta Cryst. (2015). F71(4), 358–370.
- 2) Patent number: P6473788 (2019/02/01) (Japan)