Experimental report
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The main goal of this experiment was to define appropriate conditions for collecting high resolution data from pSRII crystals. pSRII crystals are grown from lipidic cubic phases, the crystals are long thin needles or plates with typical sizes of 100 (up to 200) x 20 x a few microns. Because of the anisotropic form, the handling of these crystals without damaging the diffraction power is very difficult. Additionally, the presence of lipidic cubic phase surrounding the crystals enhances the background scattering. Therefore, similarly to bacteriorhodopsin crystals, we disolved the cubic phase by adding a lipase to the crystallization vials that will diggest the monoolein which is the lipid that form the cibuc phase.. Our previous diffraction experiments clearly showed that a long phosphatase treatment, not only disolves the cubic phase, but damages the crystals. During this experiment, we tested several lipase digestion times (from 1to 24 hours) and 25 crystals were tested. We found an optimal time of about 2 hours after which the crystallization medium is fluid enough to allow an easy crystal fishing without reducing their diffraction power. A complete data set to 2.7 Å resolution was collected.