



	Experiment title: Testing of branching enzyme crystals	Experiment number: LS-1542
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Report: Two morphologically different crystals of *E. coli* glycogen branching enzyme were tested. One form A crystal ($0.05 \times 0.05 \times 0.05 \text{ mm}^3$) grown using K/Na phosphate, pH 7.0, as precipitant, was flash-cooled using 30 % MPD as cryoprotectant. Diffraction up to 6 \AA resolution was observed. Autoindexing suggested the crystals may belong to a cubic space group. One form B crystal ($0.03 \times 0.05 \times 0.07 \text{ mm}^3$) using ammonium sulphate as precipitant was flash-cooled using 20 % MPD as cryoprotectant. Diffraction up to 3.5 \AA resolution was observed, although very weak at the edge. A data set was collected using 6 s exposure and 1° oscillation. The crystal belonged to space group P321, P3₁21, or P3₂21 with cell edges of $a = b = 144.9 \text{ \AA}$ and $c = 298.5 \text{ \AA}$, consistent with 3-7 molecules / asymmetric unit. Another data set was collected on the same crystal with an exposure of 18 s. This improved greatly the merging statistics without significant decay in diffraction. Longer exposures should be used in the future. Merging data up to 4.1 \AA the R_{sym} was 0.150 overall and 0.415 between 4.32 and 4.1 \AA , in a 96.2 % overall complete data set. These results are in press in the *European Journal of Biochemistry* (Hilden, I., Lo Leggio, L., Larsen, S. and Poulsen, P.).