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| Experiment title: X-ray structure determination of an integral membrane translocase | Experiment number: TC 204 | |
| Beamline: ID14-4 | Date of experiment: from: 16/11/2007 to: 16/11/2007 | Date of report: 26.08.2008 |
| Shifts: | Local contact(s): Mr. Gianluca CIOCI | <i>Received at ESRF:</i> |

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Report:

The test beam time was requested for testing different crystals obtained from different purification strategies of an integral membrane translocase.

Overall, we could get diffraction images from nine crystals. Based on the diffraction pattern, we assume for of the tested crystals were pure detergent crystals (sharp, concentric rings with too large spacings). From five crystals we obtained very weak diffraction patters (resolution not better than 15 Å). Currently we try to optimize these crystallization conditions for future diffraction experiments.

To make efficient usage of the provided test beam time we have tested different crystals from other projects. These projects are related to bacterial redox enzymes which use different diols and carbohydrates as substrates. We were able to collect one dataset from 1,5-anhydro-D-fructose reductase and four data sets from GatDH. GatDH was grown with a Co(II)-salt. Therefore we have tried to collect one data set near the absorption edge of cobalt.

Unfortunately, the monochromator didn't work correctly. The fixed wavelength was too far away from the edge, so no anomalous signal could be measured. Further problems we have experienced: one crystal vial/tube got stuck in the sample changer, so it had to be removed manually; the beam line program crashed a couple of times and could not be restarted for a while.