



	Experiment title: Outer membrane iron transporters	Experiment number: LS-1810
Beamline: ID14-1, ID29-1	Date of experiment: from: 01.02.01 to: 03.02.01	Date of report: 27.02.01
Shifts: 48 hours	Local contact(s): Steffi Artz (ID14-1); Vivian Stojanoff (ID29-1)	<i>Received at ESRF:</i>
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Report:

We have grown crystals of two distantly related *E. coli* iron transporters (integral outer membrane proteins). For the first transporter, we collected a native data set to 2.3Å resolution on ID29-1 in Feb. 2001, and a native data set to 2.7Å resolution on ID14-1 on the same dates. The data set collected on ID14-1 could not be indexed due to radiation damage suffered by the crystal. For the data set collected at ID29-1, images were indexed with DENZO, scaled with SCALEPACK and SCALA, and found to have the symmetry of space group P2₁2₁2, with unit cell constants $a=116.8$, $b=89.4$, $c=95.8$ Å. Estimation of V_M indicates that the asymmetric unit contains one transporter, corresponding to a solvent content of 58.9%. The solution of the structure by molecular replacement is underway (sequence similarity 17%). We are currently growing the selenomethionine version of the transporter and anticipate collecting MAD data in the next few months if molecular replacement fails. For the second iron transporter, we collected a partial 4Å data set at ID14-1 in November 2000 and are currently working on improving the diffraction properties of the crystals.