



	<b>Experiment title:</b> Staphylococcal exotoxin 1	<b>Experiment number:</b> LS1810
<b>Beamline:</b> ID14-1	<b>Date of experiment:</b> from: 1/2/2001 to: 2/2/2001	<b>Date of report:</b> 27/2/2001
<b>Shifts:</b> 3	<b>Local contact(s):</b> Dr. Stefi Arzt	<i>Received at ESRF:</i>

**Names and affiliations of applicants** (\* indicates experimentalists):

Ajit Basak\*, David Briggs and Claire Naylor,  
Dept of Crystallography, Birkbeck College, Malet St, LONDON, UK, WC1E 7HX

**Report:**

The staphylococcal exotoxins (sETs) are a newly discovered family of superantigen-like molecules. We have had a number of problems with crystals of sET1, the first member of the family, being intimately twinned. Following a change in the crystallisation conditions, we were able to collect good quality data on an untwinned sET1 crystal for the first time (data collection statistics in table 1 below). This data will be used to investigate possible molecular replacement solutions, and the new crystal conditions will be used to grow crystals for structure solution by multiple isomorphous replacement.

Spacegroup: $P4_{3/1}2_12$			Cell dimensions: $a=b=81.92 \text{ \AA}$ , $c=147.38 \text{ \AA}$				
Res. ( $\text{\AA}$ )	$N_{\text{unique}}$	$R_{\text{merge}}$ (%)	$R_{\text{merge}}$ (2.64-2.5 $\text{\AA}$ )	Complete (%)	Complete (2.64-2.5 $\text{\AA}$ )	Redundancy	Redundancy (2.64-2.5 $\text{\AA}$ )
2.5	18097	9.9	38.7	100.0	100.0	7.7	7.6

Table 1: Data processing statistics for untwinned crystal of sET1