



	Experiment title: Data collection on Cd- β -lactamase at 1.35Å resolution Data collection on survivin	Experiment number: LS1506
Beamline: ID14-2	Date of experiment: from: 7 to: 8 October 2000	Date of report: 27-2-2000
Shifts: 3	Local contact(s): Olof SVENSSON	<i>Received at ESRF:</i>
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Report:

In order to study the active site of the *Bacillus cereus* metallo- β -lactamase (a native Zn-enzyme) by perturbed angular correlation of γ -rays (PAC), a high resolution structure of the Cd-substituted enzyme is required.

The crystals of the Cd-substituted enzyme are isomorphous to the native zinc ones (Space group: C2, a=53.25Å, b=61.38Å, c=69.65Å, β =93.24°). Data were collected over 150° of the reciprocal space on ID14 EH2, in two passes, the first to a high resolution limit of 1.35 Å (150x1° oscillations, 3x5 secs/°) and the second with shorter exposure time to reduce the number of overloaded reflections, to a high resolution limit of 2 Å (75x2° oscillations, 2x2.5 secs/°). The data were processed and scaled with the DENZO/SCALEPACK programs (R_{sym} =9.9%, completeness 98.2% and multiplicity 3.3).

The structure was solved by molecular replacement with AMoRe and refined with CNS to a $R_{\text{work}}=21.9\%$ and a $R_{\text{free}}=25.2\%$. The structure revealed the presence of two Cd atoms and surprisingly a citrate molecule in the active site.

Survivin data collection to 3.2 Å

Survivin is a newly described apoptosis inhibitor that is expressed in many human cancers and appears to play a critical role in both apoptosis regulation and cell cycle progression.

Survivin crystals are C-centred monoclinic (SG: C2, $a=113.45\text{Å}$, $b=71.12\text{Å}$, $c=80.77\text{Å}$, $\beta=127.43^\circ$). We have collected on ID14 EH2, two native data sets to 3.35 Å (140x2° oscillations, 3x2.5 secs/°). The data were processed and scaled with the DENZO/SCALEPACK programs ($R_{\text{sym}}=7.9\%$, completeness 90.1% and multiplicity 9.1).