

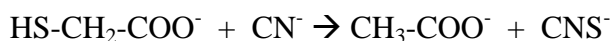


	Experiment title: SseA	Experiment number: MX-129
Beamline:	Date of experiment: 5-6/ 08/03	Date of report: 26/08/03 <i>Received at ESRF:</i>
Shifts: 12 h	Local contact: C. Petosa	
Names and affiliations of applicants (* indicates experimentalists): Andrea Spallarossa*, Martino Bolognesi and Domenico Bordo Advanced Biotechnology Center and Universita' di Genova L.go R. Benzi, 10 16132 GENOVA (I)		

Report:

Introduction

3-mercaptopyruvate sulfurtransferases are widespread enzyme which catalyse, *in vitro*, the transfer of a sulfur atom from 3-mercaptopyruvate to cyanide according to the general scheme:



E. coli SseA, a member of 3-mercaptopyruvate sulfurtransferase family, was cocrystallized with a substrate analogue (3-bromo pyruvate) in order to have structural information about the catalytic mechanism of the 3-mercaptopyruvate-dependent sulfurtransfer reaction. Moreover a soaking with cyanide anion, the *in vitro* sulfur acceptor of the reaction, was tried.

Data sets collected

	3-Brpyr	3-Brpyr / CN⁻
Space group	P4(3)	P4(3)
Unit cell (Å)	$a = b = 150.79$ $c = 39.56$	$a = b = 150.56,$ $c = 39.57$
Mosaicity (°)	1.1	1.0
Resolution (Å)	3.2	3.0
Measurements	279,114	390,792
Unique reflections	15,207	19,346
Completeness (%)	94	99.8
Rsym (%)	9.6	10.3

Results achieved

The quality of the data together with the intrinsic flexibility of the enzyme active site loop, do not allowed a clear observation of the covalent modification of the catalytic residue.