



ESRF

Experiment title:

Time resolved photoproducts of mutant myoglobins
by XAS

Experiment

number:

LS-370

Beamline:

ID 24

Date of experiment:

from: 24/05/96 .to: 02/06/96

and

from: 27/07/96 to: 02/08/96

Date of report:

28/02/97

Shifts:

Local contact(s):

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Report:

In order to study the structure of the metastable states in the photoproducts of mutant horse carbonmonoxymyoglobin (MbCO) by time resolved XANES spectroscopy in dispersive mode at the beam line ID24 a run from 24 May to 2 Jun 96 has been assigned. Because of hutch safety problems related with the laser use the run has been shifted to the last week of July 96.

We have installed on the beam line an Helium cycle criostat, a Nd-Yag laser and a optical lamp source that we have brought from Rome University. The first step of the experiment was to reproduce the XANES data of photolyzed MbCO previously obtained by our group [S.Della Longa et al., Eur. Biophys. J. 23 : 361 (1994)].

We have realized with the help of the beamline staff two experimental approaches, using the laser pulses and continous illumination to excite the sample. In both cases we have been able to cover a temperature range from 20K to 300K acquiring spectra with different warming rate.

Some technical problems due to the instabilities of the beam have prevented us from acquiring spectra with a good signal to noise ratio.