ESRF	**Experiment title:** Structure determination of monoamine oxidase	**Experiment number:** LS-1517
Beamline: ID14-EH2	**Date of experiment:** 10/9/1999	**Date of report:** 29.02.00
Shifts: 2	**Local contact(s):** E.Mitchell	*Received at ESRF:*

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Report:

Background: Monoamine oxidase (MAO) is a membrane bound flavoenzyme located in the outer mitochondrial membrane. MAO is involved in many neurological disorders such as Parkinson's disease and depression. The enzyme is the target of drugs currently employed in the treatment of such disorders. In eukaryotes, MAO is expressed in two forms, MAO-A and MAO-B, which are both homodimers of about 60 kDa. We have obtained crystals of MAO, which, however, are quite hard to reproduce and extremely fragile, making their handling particularly problematic.

Experiments carried out at the ESRF: A 3.2 Å native data set has been collected on ID14-EH2 with the following statistics: n° measurements=203188, n° reflections=101531, Rsym=9.5% (28.9% in the highest resolution shell), completeness=91.4% (90.7%), I/sigma=7.1 (2.0).

Results: The first good quality data set has been collected on crystals of MAO. The space group has been determined to be C2 with cell parameters a=109 Å, b=155 Å, c=132 Å and β=114°. This result paves the way to structure determination by MAD or MIR techniques.