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REDUCTION OF THE ACTIVE SITE OF BOVINE LIVER CATALASE WITH X-RAY

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Abstract content

Bovine liver catalase (BLC) is an homotetrameric enzyme that catalizes the dismutation of hydrogen peroxide, producing two water molecules and one oxygen molecule. This enzyme belongs to clade 3 monofunctional catalases that depends on an heme group per subunit (small subunit catalases). The objective of this project is getting the crystallographic structure of compound I and analyze the reduction of the active site with increasing X ray doses. Because BLC is a tetrameric enzyme, it can be compared the susceptibility of reduction among the four active sites. We can compare this process of the active site reduction with a large subunit catalase. For this purpose, the BLC crystals were soaking on peracetic acid, producing the compound I. The crystals of compound I were collected at synchrotron. The four monomerers do not show the same behavior with increasing X ray doses.

Summary

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