THE THERMAL INACTIVATION OF Eupenicillium erubescens α-L-RHAMNOSIDASE

O. V. Gudzenko, N. V. Borzova, L. D. Varbanets

Zabolotny Institute of Microbiology and Virology of the National Academy of Sciences of Ukraine, Kiev, Ukraine
The study of the features of thermal inactivation of α-L-rhamnosidase from *Eupenicillium erubescens* aiming to develop further strategies for improving the stability of the enzyme was the purpose of the research. Two forms of α-L-rhamnosidases were studied. They were obtained by producer cultivation on two different carbon sources (rhamnose and naringin). It was shown that at temperatures above 60°C heat inactivation process is described by the first order reaction kinetics. It was established that stability of α-L-rhamnosidase from *E. erubescen* grown on naringin depends on hydrophobic interactions rather than electrostatic ones. It was shown that aggregation of enzyme molecules could lead to their thermal stabilization. The important role of cysteine residues and possible involvement of the metal cation in maintaining of active form of α-L-rhamnosidases from *E. erubescens* was highlighted.

**Key words**: *Eupenicillium erubescens*, α-Lrhamnosidase, thermal inactivation, naringin, rhamnose.

© Palladin Institute of Biochemistry of the National Academy of Sciences of Ukraine, 2008

{spoiler title=REFERENCES}


{/spoiler}