



## [Denaturation stabilization of alpha-amylase from *Aspergillus oryzae*]

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Abstract: Denaturation of alpha-amylase from *Aspergillus oryzae* was studied under the effect of heating urea and some other denaturing agents. Inhibition in the enzyme denaturation, deviation from the first order equation and, consequently, establishment of the false equilibrium in the system are shown. The values are calculated for the reaction rate constants of alpha-amylase denaturation under the effect to heat (40 degrees C) and urea. A method is developed for isolating native amylase stabilized by heating at 40 degrees C during the period of inactivation slowing down and preservation to the 50-70% activity in the system. It is shown that in the presence of calcium ions the stability of the isolated native enzyme is 13.0 +/- 2.5% higher on the average to heating up to 40 degrees C, 28.4 %/- 7.2% higher - to the effect of 5.5 M urea and 18.4 +/- 3.6% higher - to 18% alcohol.

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