

KINETIC ANALYSIS OF *KLUYVEROMYCES LACTIS* INVERTASE

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Invertase hydrolyses sucrose in equal quantities of glucose and fructose. It is used in production of inverted sugar syrup, in products for oral cavity hygiene, in prepare of culture medium, in biosensors. Besides that, the production of sweetener from the enzyme has increased. This study proposed production, purification and biochemistry characterization of *Kluyveromyces lactis* invertase. *K. lactis* extracelular invertase was obtained from supernatant solutions of the minimum culture medium, containing microorganisms grown for ten hours. The enzymatic extract was separated from yeast cells by filtration and it was lyophilized after. Invertase was partially purified in exclusion chromatography column (Sephacryl S-300). The chromatographic profile showed a single peak well defined. Collected fractions were reunited and utilized in kinetic and biochemistry characterization of the enzyme. Bigger activity assay was at pH equal 6,0 and at temperature of 60°C. Invertase had Km equal 384 mM and Vmáx of 10,16 $\mu\text{M}\cdot\text{s}^{-1}$. The enzyme maintained its stability for 120 minutes at the temperatures 40°C, 50°C and 60°C. Lactose, maltose, fructose, urea and Ca^{++} at 2 mM concentrations did not affect the invertase activity. In spite of that, ion Cu^{++} was capable of increasing the enzyme activity at lower concentrations. The data obtained showed that *K. lactis* invertase could be used in industrial proceeds successfully.