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Proteolytic Activity of *Lactobacillus bulgaricus* Grown in Milk

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The proteolytic activity of *Lactobacillus bulgaricus* LBB grown in skim milk was determined at 42 °C as a function of growth temperature and TCA-soluble N in the growth medium. A new method was used for harvesting bacteria from coagulated milk with the addition of EDTA (pH 12) to reach pH 7.

Maximum specific proteolytic activity was observed with bacteria grown at temperatures between 34 and 38 °C in milk with low concentrations of TCA-soluble N. This activity decreased when growth temperature was above 40 °C or when TCA-soluble N increased in the growth medium. Specific proteolytic activity did not change in bacteria grown at 42 °C when TCA-soluble N varied or when cells were grown in milk with a high concentration of free amino acids at different incubation temperatures. Analysis by SDS-PAGE showed that this strain hydrolyzed α- and ß-caseins.

Key Words: *Lactobacillus bulgaricus* • proteases • proteolytic activity

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