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A Comparative Study: Aminopeptidase Activities from *Lactobacillus delbrueckii* ssp. *bulgaricus* and *Streptococcus thermophilus*

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Aminopeptidases from *Lactobacillus delbrueckii* ssp. *bulgaricus* and *Streptococcus thermophilus* were isolated. Enzymes were purified by chromatography on DEAE-cellulose and Sephadex G-150. The enzymes had molecular weights of 98,000 and 89,000 and optimal activity at pH 6.0 and 40° C and pH 6.5 and 35° C. respectively. The *L. delbrueckii* ssp. *bulgaricus* enzyme had higher activity on L-lysyl-4-nitroanilide than did the *S. thermophilus* enzyme. Both enzymes were inactivated by EDTA and 1,10-phenanthroline. Classical sulphhydryl and serine group reagents had little or no inhibitory effect on the enzymes; nevertheless, Cu⁺⁺ and Hg⁺⁺ resulted in strong inhibition; Ca⁺⁺ stimulated the *L. delbrueckii* ssp. *bulgaricus* enzyme, and Mg⁺⁺ stimulated the *S. thermophilus* enzyme.

Key Words: aminopeptidase • *Lactobacillus delbrueckii* ssp. *bulgaricus* • *Streptococcus thennophilus*

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