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Free D- and L-Amino Acids from Hydrolyzed Milk Proteins by *Pseudomonas fluorescens* ATCC 948

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Cell-associated peptidase activity of *Pseudomonas fluorescens* ATCC 948 was studied on hydrolyzed milk proteins. The substrate was produced by treatment of the UHT skim milk with neutral endoprotease B500. The cell-associated peptidase activity was determined by gas chromatographic analysis of free D- and L-amino acids. The total free amino acids were higher when the cell-associated peptidases acted on hydrolyzed milk proteins (202.8 μg/ml) rather than on unhydrolyzed skim milk (63.9 μg/ml). Glutamic acid (65.1 μg/ml), Leu (36.9 μg/ml), and Ala (16.5 μg/ml) were the most abundant. Concentrations of D-amino acid isomers (28.3 and 3.7 μg/d for D-Glu and D-Ala, respectively) also were high. Hydrolysis of the dipeptide L-leucyl-L-leu was 61% but was minimal for the other D- and L-configurational isomers of the dipeptide.

Key Words: *Pseudomonas fluorescens* • peptidases • bitter taste • D-amino acids

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