

Production and Characterization of an Enzymatic Hydrolysate of Skim Milk

Lactose and Proteins

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Enzymatic hydrolysis of skim milk lactose and proteins was investigated in a batch reactor; the final aim is to produce a predigested dietary product. The use of yeast β -galactosidase, a vegetable protease, a fungal protease, and a bacterial protease was investigated. Sequential and simultaneous lactose and protein hydrolysis were studied in order to diminish incubation times. In the lactose hydrolysis, 90% conversion was obtained after 4 hr using reconstituted spray-dried skim milk, and after 3 hr using fluid pasteurized skim milk. In the simultaneous hydrolysis, 82% lactose hydrolysis and a substantial peptide hydrolysis with 80% of material smaller than 5,000 molecular weight (and high in small peptides) was obtained after 5 hr. This was adequate for the preparation of a specialized dietary product to be used in enteral hyperfeeding. Copyright © 1982, Wiley Blackwell.

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