

Production of Ultrafiltered Skim Milk Retentate Powder. 2. Functional Properties

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High protein skim milk retentate powders with modified functional properties were produced using UF and spray drying. Different heat treatments (65° C for 30 min, 75° C for 28 s, and 85° C for 28 s) and pH adjustments (6.4, 6.7, and 7.0) were applied before spray drying. The pH adjustment affected gel water-holding capacity, acid gel strength, emulsifying capacity, and foaming capacity. Heat treatment also affected gel water-holding capacity, acid gel strength, and emulsifying capacity, but not foaming capacity. The interaction of heat treatment and pH adjustment affected gel water-holding capacity, acid gel strength, emulsifying capacity, and foaming capacity.

Key Words: skim milk retentate powder • heat treatment • pH • functional properties

Submitted on June 1, 1992

Accepted on June 4, 1993

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