

Mozzarella Cheese: Impact of Coagulant Type on Functional Properties

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The objective of this study was to determine the impact of coagulant type and refrigerated storage on functional properties of unmelted and melted Mozzarella cheese. A "no-brine" Mozzarella cheese-making method was used to produce cheese with homogeneous chemical composition. Cultured Mozzarella cheeses were made with three different coagulants (*Endothia parasitica* protease, chymosin derived by fermentation, and *Mucor miehei* protease) in 1 d, and cheese making was replicated on 3 different d. During 50 d of storage at 4° C, texture profile analysis parameters (hardness, cohesiveness, and springiness) of unmelted cheese decreased, meltability increased, apparent viscosity of melted cheese decreased, and free oil formation from melted cheese increased. Overall, the Mozzarella cheese made using *E. parasitica* protease was softer in unmelted cheese texture, was more meltable, and had lower apparent viscosity and more free oil release on melting than other cheese. In general, cheeses made with chymosin and *Mucor miehei* protease were similar in functional characteristics.

Key Words: Mozzarella cheese • coagulant type • functional properties • apparent viscosity

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