STUDIES ON SOME PROPERTIES OF BUFFALOE'S MILK PROTEINS

By

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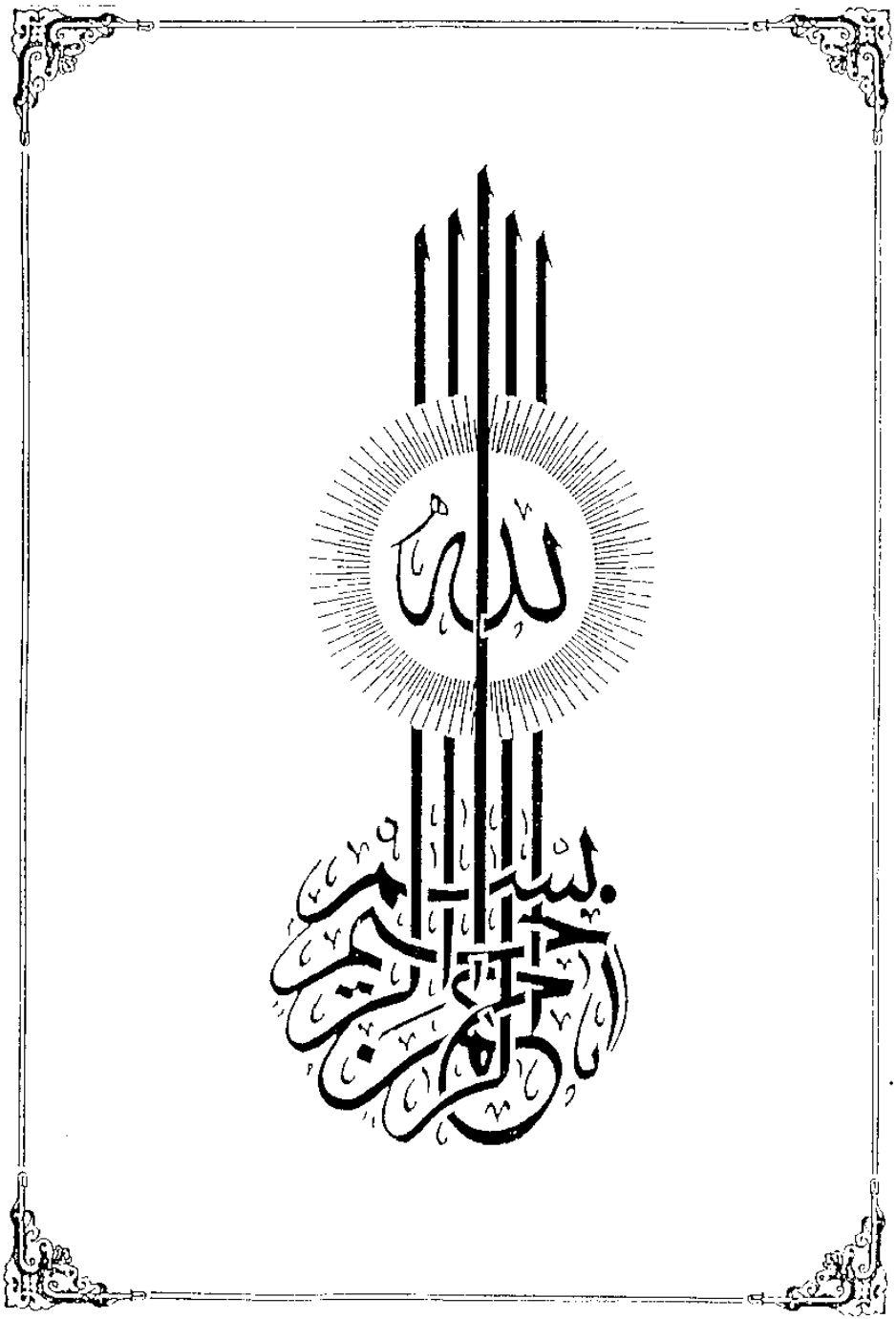

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ABSTRACT

Milk proteins are commercially prepared for using in formulated food products as nutrients as well as functional ingredients. This study was devoted to investigate the composition and function properties (Solubility, emulsifying properties, water and oil absorption, foaming property and buffer intensity) of buffaloe's and cow's milk protein preparations (Total milk proteinates, casein co-precipitate, HCl-casein, lactic casein and rennet-casein). Buffaloe's total milk proteinates showed the best solubility and emulsifying properties against the other protein preparations whereas,buffaloe's rennet casein showed the least value of solubility and emulsifying properties. Both buffaloe's total milk proteinates and casein co-precipitate possessed higher water absorption capacity but they gave a low value regarding oil absorption capacity. HCl-casein

and rennet casein gave high value for oil absorption capacity in comparison with other groups of protein. The water oil absorption index was the best for buffaloe's total milk proteinates and casein co-precipitate, while was the least for buffaloe's rennet casein. Buffaloe's total milk proteinates gave the lowest value for foam expansion than the other protein preparations. In buffaloe's milk protein preparations the wet and lyophilized samples gave better function properties than oven dried samples. Solubility emulsifying, and foaming properties of buffaloe's milk protein preparations were pH dependent. Buffaloe's milk protein preparations gave maximum buffer intensity at the range of pH 5.2-6.6. Buffaloe's and cow's milk protein preparations showed similar trend in emulsifying, foaming and buffer intensity properties but gave different behaviour in solubility properties and water and oil absorption. Buffaloe's and cow's total milk proteinates showed high value of protein content and less value of ash content in comparison with buffaloe's and cow's rennet casein which showed high value of ash content against other protein preparations.

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