

Optimization of Moisture Content for Highest Tensile Strength of Instant Soluble Milk Tablet and Flowability of Milk Powder

Authors : Siddharth Vishwakarma, Danie Shajie A., Mishra H. N.

Abstract : Milk powder becomes very useful in the low milk supply area but the exact amount to add for one glass of milk and the handling is difficult. So, the idea of instant soluble milk tablet comes into existence for its high solubility and easy handling. The moisture content of milk tablets is increased by the direct addition of water with no additives for binding. The variation of the tensile strength of instant soluble milk tablets and the flowability of milk powder with the moisture content is analyzed and optimized for the highest tensile strength of instant soluble milk tablets and flowability, above a particular value of milk powder using response surface methodology. The flowability value is necessary for ease in quantifying the milk powder, as a feed, in the designed tablet making machine. The instant soluble nature of milk tablets purely depends upon the disintegration characteristic of tablets in water whose study is under progress. Conclusions: The optimization results are very useful in the commercialization of milk tablets.

Keywords : flowability, milk powder, response surface methodology, tablet making machine, tensile strength

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