

Development of Cost-Effective Protocol for Preparation of Dehydrated Paneer (Indian Cottage Cheese) Using Freeze Drying

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Abstract : Paneer or Indian cottage cheese is an acid and heat coagulated milk product, highly perishable because of high moisture (58-60 %). Typically paneer is marble to light creamy white in appearance. A good paneer should have cohesive body with slight sponginess or springiness. The texture must be smooth and velvety with close-knit compactness. It should have pleasing mild acidic, slightly sweet and nutty flavour. Consumers today demand simple to prepare, convenient, healthy and natural foods. Dehydrated paneer finds numerous ways to be used. It can be used in curry preparation similar to paneer-in-curry, a delicacy in Indian cuisine. It may be added to granola/ trail mix yielding a high energy snack. If grounded to a powder, it may be used as a cheesy spice mix or used as popcorn seasoning. Dried paneer powder may be added to pizza dough or to a white sauce to turn it into a paneer sauce. Drying of such food hydrogels by conventional methods is associated with several undesirable characteristics including case hardening, longer drying time, poor rehydration ability and fat loss during drying. The present study focuses on developing cost-effective protocol for freeze-drying of paneer. The dehydrated product would be shelf-stable and can be rehydrated to its original state having flavor and texture comparable to the fresh form. Moreover, the final product after rehydration would be more fresh and softer than its frozen counterparts. The developed product would be shelf-stable at room temperature without any addition of preservatives.

Keywords : color, freeze-drying, paneer, texture

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