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Improvement of viscosity and overall acceptability of stirred yoghurt at higher product temperatures

Stirred yoghurt, loses its spoonability at higher product temperatures, causing a big problem in consumer acceptancy of tropical countries. The objective of this study was to improve the viscosity and overall acceptability of stirred yoghurt at higher product temperatures by utilizing sweet whey powder instead of skim milk powder.

Five treatments were given by substituting skim milk power, in stirred yoghurt mix, at 0%, 15%, 30%, 45% and 60% levels with sweet whey poweder. Samples were evaluated

organoleptically by a group of 15 trained panelists using a five point hedonic scale. The viscosity was measured at product temperatures of 4C°, 15 C° and 27 C° . The acidity and pH were monitored at 4day intervals during the cold storage for 32 days at 4 1 C° . Final product was analysed for crude protein, fat ash, total solids, pH, acidity and Brix value. The coliform, yeast and mold counts were also taken.

Yoghurt prepared with 30% level of sweet whey powder was rated the best on the basis of sensory quality as well as the highest viscosity in all the temperatures. A significant (p,0.05) decrease in pH with concomitant increase in acidity was observed during the storage at 4± 1C. Finished product specifications for the 30% level of substitution were 3.8% crude protein, 3.5% fat, 0.82% ash, 23.5% total solids, 4.41pH, 0.90% acidity, 19.5Brix value with negative coliforms and 4c.f.u./g yeast and mold.

The results revealed that sweet whey powder could be substituted for skim milk powder at an optimum level of 30% in the yoghurt mix to achieve the objectives. The final product can be stored for 32 days at 4 1 C° without any deterioration of quality parameters. It was found that the cost of production per cup of yogurt can be reduced by 11 cents by this substitution.