

Accelerated storage and shelf-life of whey protein concentrate and gum arabic coated solid jaggery

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SUMMARY :

Sugarcane jaggery samples (25 g) were coated with the optimized concentration of edible coating (0.5% WPC and 0.5% gum arabic) and placed in LDPE, HDPE and PP pouches packed thenine pouches (three LDPE pouches, three HDPE and three PP pouches) with MAP machine. The samples were analyzed for important physico-chemical characteristics *viz.*, sucrose, reducing sugars, colour, Hardness and moisture content. The whey protein coated solid jaggery stored in PP packets under vacuum was found to be better *i.e.*, low increase in reducing sugars and decrease in non-reducing sugars, as compared to the samples packed in LDPE, HDPE under vacuum and MAP at storage temperature of 25°C. Accelerated storage studies were conducted for the sugarcane solid jaggery samples (50 g) coated with optimized concentration of edible coating (0.5% concentration of both protein (WPC) and polysaccharide (gum arabic) based) placed in LDPE, HDPE and PP pouches with vacuum and MAP packing and all these pouches were placed in the desiccator at 90% RH and this desiccator was kept in incubator at 45p C. The maximum predicted storage life *i.e.* 255.44 days was obtained in the 0.5% WPCedible coated solid jaggery packed in LDPE with vacuum packaging machine.

KEY WORDS : Jaggery, Edible coating, Whey protein, Gum arabic, Accelerated storage studies

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