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Efficacy of edible coatings in quality maintenance and shelf life extension of pink fleshed guava *(Psidium guajava L.)* fruit

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Guava (*Psidium guajava L.*) is an important fruit frequently consumed raw as having high nutritional value. However, its perishable nature due to softening limits its storage and handling. Therefore, the present study has been carried out to evaluate the efficacy of biodegradable coatings of chitosan (0.5% and 1%) and alginate (0.5% and 1%) on quality characteristics of pink fleshed guava fruits stored at 25 ± 1°C and 10 ± 1°C, 65-70% RH. The results revealed that guava fruit coated with chitosan and alginate had a significant delay in the change of weight loss, decay percentage, total soluble solids, pH, titratable acidity and sugar accumulation as compared to control fruit. Edible coatings showed a positive effect on maintaining higher concentration of antioxidants which decreased in control fruit due to their over-ripening in both the storage conditions. Coated fruit had positive effects on the inhibition of cell wall degrading enzyme activities as compared to control. Guava samples treated with chitosan and alginate coatings maintained good sensory quality, whereas the sensory quality of control samples became unacceptable. The result of the present study suggests that application of chitosan and alginate on guava fruit surface represents as a viable alternative for extending their shelf life. These findings suggest that the beneficial effect of chitosan 1% were superior at the 10 °C. Therefore, the coating of chitosan 1% can be used commercially for prolonging the storage life of guava fruit, with better effect on the fruit stored at 10 °C.

Biography

Neeta B. Gol is pursuing her doctoral research in the area of postharvest physiology of perishable horticultural products. She has earned her M. Sc. degree from Sardar Patel University, Gujarat, India. Presently she is working as a CSIR- SRF. Her research interest includes edible coatings for fruits and vegetables and also published some research papers in this area.

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Prevention of anemia in rural adolescent girls

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Iron deficiency is one of the most prevalent micronutrient deficiency found in developing countries. Nutritional anemia can result in life long disadvantages including low productivity, decreased immune system mental ability etc. A sample of 250 adolescent girls of age group of 13 to 18 years was selected randomly from rural areas of Beed district. The experimental group 'A' received dietary supplementation (ground nut & jaggary Ladu) for ninety days. Whereas group C not received any supplementation and treated as control group. These samples were examined anthropometrically, biochemical & Clinical before & after supplementation. Anthromentrilcal data show that experimental group result was better or good as compared to control group. Out of 250 adolescent girls 95% had hemoglobin level below 9gm. i.e. These adolescent girls were anemic Rural adolescent girls were found to consume a monotonous meal and subsisted mainly on cereals poverty, illiteracy & poor food consumption pattern speaks for nutritional anemia. These rural areas are alarming & no. of deficiency diseases is seen. To solve this problem nutrition education, food fortification & food based approaches are the most effective measures to address the micro nutrient deficiency like iron.

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