

Investigation on quality and shelf life of processed papaya fruit bars

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A study was conducted to develop papaya fruit bars and to investigate their biochemical qualities, sensory characteristics and shelf life. Mature ripe papaya fruits were collected and the pulp was blended into a thick paste. Sugar, Citric acid and Corn flour at two different concentrations of 2% and 5% were added to the paste. The mixture was cooled and processed with Ascorbic acid, Potassium metabisulphite and Sodium benzoate separately. They were dried in the oven at 50°C for 20 hours and cut fruit bars were stored in plastic boxes at room temperature of 30 ± 2°C. The Papaya fruit bars were assessed for quality characteristics and shelf life throughout storage. A significant (P<0.05) decline was observed in levels of Ascorbic acid and total sugars of all treatments whereas titrable acidity was significantly increased during the storage. The Potassium metabisulphite treated fruit bars with 5% of Corn flour had a slow rate of decline in total sugars and better retention of Ascorbic acid compared to the other treatments. The total sugar content of this treatment reduced from 25.8% to 23.8% whereas the titrable acidity increased from 0.42% to 0.56% during the storage. The results of sensory analysis revealed that the Potassium metabisulphite treated fruit bar with 5% Corn flour was preferred for most of the sensory attributes by the panelists. Attractive orange colour was observed in Potassium metabisulphite treated bars owing to reduced enzymatic browning during processing and storage. The study also focused on the suitability of treatments in terms of storage life. Among the treatments, Potassium metabisulphite treated fruit bars with 5% of corn flour had the maximum shelf life of 12 weeks at 30°C.

Keywords: Biochemical qualities, Papaya, Sensory analysis, Shelf life, Fruit bars

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