

EFFECT OF CHEMICAL PRESERVATIVES AND
TEMPERATURES ON THE QUALITY OF BANANA PUREE



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ABSTRACT

Thermal processing is a technique widely used to preserve foods, which could be applied to utilize banana to produce a dessert food named banana puree. A research was conducted to assess the shelf life and quality of banana puree using different concentrations of preservative and processing temperatures.

Fresh fully ripe sugar banana fruits were selected, washed and peeled and they were dipped in different concentrations of potassium metabisulphite solutions (500 ppm, 750 ppm, 1000 ppm) for about 5 minutes. They were ground to make banana pulp. Benzoic acid (0.03% of pulp weight) was added to banana pulp and was heated for different temperatures (70°C, 80°C, 90°C, 100°C) for 15 minutes. The products were filled in sterilized bottle and were sealed. The products under these treatments were assessed for nutritional quality, sensory characters and shelf life.

Nutritional analysis was done for, titrable acidity, ascorbic acid content, total soluble solids, total sugars and crude fibre for weekly interval throughout the experimental period. The declining trend with storage period was observed in ascorbic acid, total soluble solids, total sugars and crude fibre and an increasing trend was observed with storage period in titrable acidity for all the treatments. Compare to the product heated to 80°C and 90°C, the product heated to 70°C showed better performance. Among the product heated to 70°C, the product treated with 1000 ppm potassium metabisulphite showed better performance.

Sensory qualities were assessed for banana flavour, taste, colour, texture, absence of off-flavour, absence of browning and overall acceptance for eight treatments. Nine-point hedonic scale ranking method was used to evaluate the organoleptic properties. The results revealed that, there was significant difference among the treatments for banana flavour, taste, colour, texture, absence of off-flavour, absence of browning and overall acceptability at 5% significant level.

Based on the study, the banana puree could be preserved for 6 weeks at room temperature. This can be concluded that banana fruits could be preserved as banana puree without losing its nutritional and sensory attributes.

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