

Effect of preservatives and temperatures on the quality and shelf life of pineapple cubes

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Abstract : A research was conducted to evaluate the effect of different preservatives and storage temperatures on the nutritional quality, sensory characteristics and shelf life of cut pineapple cubes. The pineapple was cut into 2.5 cm × 2.5 cm cubes and added with three different preservatives such as sodium benzoate, ascorbic acid and sodium metabisulphite. All the samples were kept at two different temperatures ($5^{\circ}\pm 0.5^{\circ}$ C and $10^{\circ}\pm 0.5^{\circ}$ C). Nutritional analysis were carried out to evaluate the changes in titrable acidity, ascorbic acid, total soluble solids, total sugars and fibre content of the fruits. The samples stored at 5°C showed the better quality compared to the samples stored at 10°C. Among the samples stored at 5°C, the ascorbic acid treated fruits showed the better quality compared to other treatments. The results of sensory evaluation revealed that there were significant differences among the treatments for pineapple flavour, taste, colour, texture, absence of off-flavour, absence of browning and overall acceptability. Ascorbic acid treated fruits stored at 5°C had the maximum shelf life of 20 days followed by the sodium metabisulphite treated ones for 18 days. The samples stored at 10°C have the lower shelf life compared to that of 5°C.

Key words: Nutritional analysis, pineapple, sensory evaluation, shelf life, temperature.