

Study on Shelf Life and Textural Properties of Minimal Processed Mixed Fruits

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Abstract : Minimally processed fruits have the attributes of convenience and fresh like quality. In minimally processed products, the cells of the tissue are alive, and the essential nutrients and flavours are retained. Some of the procedures include washing, trimming, sorting, cutting, slicing and shredding. Fruits such as pineapple and guava were taken for the study of textural properties for a period of five days. After the performance of various unit operations 50g cubes of pineapple and guava has been weighed. For determining the textural properties, samples were taken in which set of 12 samples were treated by using 1% citric acid solution and dried for 5 minutes the remaining set of 12 samples were untreated. In set of treated samples 6 were vacuum packed and stored in the refrigerator, and the other sample was normally stored. For untreated samples was done in a similar way. In texture profile analysis the force required for 1cm penetration of 2mm cylindrical needle inside the fruits were recorded for all packages. It was observed that guava the fresh sample had a force of penetration of 3250mm and as the days increased the force decreased to 357.4 mm for vacuum packed refrigerated storage. In the case of pineapple, the force of penetration of the fresh sample was 2325mm which was decreased to 26.3mm on the fourth day and very low at the fifth day for vacuum packed refrigerated storage. But in case of untreated samples, the fruits were spoiled may be because of no pre-treatment and packaging. Comparatively, it was found that vacuum packed refrigerated samples had higher shelf life than normal packed samples in ambient conditions.

Keywords : 1% citric acid solution, normal packed, refrigerated storage, vacuum packed

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