

Effect of Air Temperatures (°C) and Slice Thickness (mm) on Drying Characteristics and Some Quality Properties of Omani Banana

Authors : Atheer Al-Maqbali, Mohammed Al-Rizeiqi, Pankaj Pathare

Abstract : There is an ever-increased demand for the consumption of banana products in Oman and elsewhere in the region due to the nutritional value and the decent taste of the product. There are approximately 3,751 acres of land designated for banana cultivation in the Sultanate of Oman, which produces approximately 18,447 tons of banana product. The fresh banana product is extremely perishable, resulting in a significant post-harvest economic loss. Since the product has high sensory acceptability, the drying method is a common method for processing fresh banana products. This study aims to use the drying technology in the production of dried bananas to preserve the largest amount of natural color and delicious taste for the consumer. The study also aimed to assess the shelf stability of both water activity (aw) and color (L*, a*, b*) for fresh and finished dried bananas by using a Conventional Air Drying System. Water activity aw, color characteristic L a b, and product's hardness were analyzed for 3mm, 5mm, and 7 mm thickness at different temperatures °C. All data were analyzed statistically using STATA 13.0, and $\alpha \leq 0.05$ was considered for the significance level. The study is useful to banana farmers to improve cultivation, food processors to optimize producer's output and policy makers in the optimization of banana processing and post-harvest management of the products.

Keywords : banana, drying, oman, quality, thickness, hardness, color

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