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**Effect of freezing on quality of osmotically dehydrated banana slices**  

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**Abstract**

The objective of this study was to evaluate the effect of Fast Freezing (FF) and Slow Freezing (SF) pretreatment on the osmotic dehydration of banana. An untreated sample (UT) was used as a control. Freezing pretreated samples (FF and SF) showed a high moisture loss after 3 h soaking time, which was lowered than the untreated sample (4 h soaking time). The variation of drying time at 70°C from 4 to 6 h was studied. The physicochemical (moisture content, pH, titratable acidity, hardness, total sugar, ascorbic acid, color) and sensory properties of fast freezing, slow freezing and untreated sample were determined. The drying process significantly (p<0.05) lowered moisture content and ascorbic acid of bananas, as well as increased in hardness and total sugar. The pH and titratable acidity were no significant differences (p>0.05) among all samples at any drying time. An increase in the L* value of all samples was evident with increasing drying time, while slow freezing sample had the highest b* value (p<0.05). The sensory results revealed that freezing pretreated banana slices were acceptable equally to the untreated sample. The longer drying time caused slightly decreased (p<0.05) in scores of sweetness and overall acceptability of both freezing pretreated banana slices. © Maxwell Scientific Organization, 2015.

**Author Keywords**

Banana; Drying; Freezing; Osmotic dehydration; Pretreatment

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