

DEVELOPMENT OF PRESERVED BANANA USING SUGAR SOLUTION

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Osmotic dehydration of fruits is normally done by immersing fruits in a solution containing osmotic agents and increasing the strength of the solution gradually to remove water. This is time consuming and expensive process and this study attempted to produce osmo-dried banana with a minimum cost and time. Sucrose and liquid glucose containing 1% citric acid were used as osmotic agents. Longitudinal slices of “*ambul*” and “*seeni*” banana varieties were used. In treatment one, the initial concentration of sucrose and liquid glucose was 50% and increased up to 70% during 3 subsequent days. In treatment two, the initial concentration of sucrose and liquid glucose was 60% and increased up to 70% during 2 subsequent days. In treatment three banana slices were immersed in 70% sucrose and liquid glucose solutions and kept for 24 hrs. After osmotic dehydration further drying was continued in a cabinet dryer at 50-60 °C for 8 hrs and the dried products were packaged in a polypropylene package (gauge 200) and stored under ambient temperature (26±2 °C). Total soluble solids, moisture content, pH and acidity were assessed.

Sensory evaluation results revealed that the products were not significantly different (P>0.05). There was no significant difference (P>0.05) in total soluble solid and moisture content, however slight increase in acidity and a decrease in pH was observed in the stored product after two months. Results of the sensory evaluation done after one month revealed that all products were not significantly different (P>0.05) from initial sensory characteristics. Banana dehydrated using sucrose had better taste than that dehydrated with liquid glucose. As no significant difference (P>0.05) in results of osmotic dehydration of treatments one and two direct immersion in osmotic agent at 70% sugar solution for 24 hrs can be recommended as a low cost technique to dehydrate bananas as slices. 70% liquid glucose can be used to produce dehydrated banana slices with low sugar content. All these products could be kept for two months in polypropylene (gauge 200) bags without quality deterioration.

Key words: Banana, Osmotic dehydration, Sucrose, Liquid glucose