

**DEVELOPMENT OF BANANA SNACKS FROM
TWO VARIETIES USING AN APPROPRIATE
DEHYDRATION METHOD**

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ABSTRACT

A great potential exist for Banana value added products due to its limited preservation methods and its proven health benefits. This study was focused on development of banana snacks from most abundant two varieties; Embul (*Musa acuminata* AAB) and Seeni (*Musa acuminata* ABB) using vacuum, cabinet dehydration and Evaluation of its' Nutritional, Physicochemical , Sensory properties. Best sample was selected by conducting a sensory evaluation using 9-point hedonic scale. Vacuum dried Embul banana (VE) snack was selected as the best sample in all sensory attributes which was analyzed monthly using Friedman non parametric test in MINITAB 16 statistical software. There is an interaction between variety and the dryer ($P < 0.05$) on the phytochemical properties like total phenolic content, antioxidant activity and physicochemical properties including brix, Titratable acidity, moisture of four snacks. For all four snack samples moisture% and titratable acidity increased significantly ($P < 0.05$) while pH reduced significantly with the time. Proximate analysis done using AOAC methods revealed that, VE snack sample contains the least free fat content of $0.3 \pm 0.01\%$ and highest crude fiber content of $5.20 \pm 0.01\%$ compared to other snacks. Total plate counts were less than 10^1 CFU g^{-1} , yeast and mold counts were less than 10^3 CFU g^{-1} while *Escherichia coli* was not detected even after two months of storage which ensures that the four products are within the international stipulated limits. Vacuum dehydrator became the best dehydration method while Embul variety selected as the most preferred variety and the best variety to produce snacks based on phytochemical properties and sensory analysis. Shelf life evaluation revealed that there is no significant change ($P > 0.05$) of VS, VE and CE snacks in all the sensory attributes throughout the storage period. Developed banana snacks can be safely stored under room temperature for two months without quality deterioration.

Key words: Banana snacks, Phytochemical, Sensory evaluation, Shelf life, Vacuum dehydration