

DEVELOPMENT OF VALUE ADDED SNACKS FROM TWO BANANA VARIETIES USING CABINET DEHYDRATION: A PRELIMINARY STUDY TO IMPROVE PROCESSING OF BANANA IN SRI LANKA

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Although banana is not seasonal, due to low processing rates, banana wastage is higher compared to other local fresh fruits. The present study was focused on developing value added snacks from Embul banana (*Musa acuminata AAB*) and Seeni banana (*Musa acuminata ABB*) using cabinet dehydration at 55° C. Embul and Seeni banana were used as the two treatments to prepare snacks. Best sample was selected by conducting a sensory evaluation using 9-point hedonic scale. Both snacks, Cabinet dehydrated Embul (CE) and Cabinet dehydrated Seeni (CS), obtained moderate median sensory scores in all sensory attributes. Also, there was no significant change ($P > 0.05$) in the sensory attributes between CE and CS snacks, except for the relative change of color of CS snack over the two months storage. CS snack had 22.68% yield percentage and CE snack had 13.8%. Proximate analysis was carried out for the two banana snack samples using AOAC, 1990 methods. CE snack sample contained $5.02 \pm 0.00\%$ moisture, $4.89 \pm 0.005\%$ crude fiber, $0.19 \pm 0.01\%$ free fat while CS snack sample consisted with $5.4 \pm 0.00\%$ moisture, $1.23 \pm 0.01\%$ crude fiber, $0.68 \pm 0.02\%$ free fat. Microbial properties (such as total plate count, yeast and mold count, *Escherichia coli*) were analyzed according to standard method. Shelf life data were analyzed with one-way ANOVA test with 95% significance level. Microbiological counts were less than the internationally stipulated limits by WHO, which determined that these snacks were safe for human consumption up to two months storage. Moreover, cabinet dehydration has improved the processing of banana although it is only a preliminary processing step.

Keywords: Banana snacks, cabinet dehydration, physicochemical properties, processing