

# **DEVELOPMENT OF A COCONUT MILK BEVERAGE INCORPORATED WITH CINNAMON AND GINGER**

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## ABSTRACT

There is a great potential for commercialization of spiced natural beverages, dairy free and healthy drinks from coconut milk in both domestic and the international market front. This study was focused to develop and assess the nutrient content and physicochemical properties (pH, fat%, moisture%, brix, Free Fatty Acid (FFA) and Titratable Acidity (TA) as citric acid) of a spiced coconut milk beverage. Both spices were added at 0.2% (w/v). Five treatments were prepared by incorporating Cinnamon powder: Ginger powder at the rate of 25%:75% (T1), 40%:60% (T2), 50%:50% (T3), 60%:40% (T4) and 75%:25% (T5) (w/w). Sensory evaluation of the product was tested using 9-point Hedonic scale with 30 untrained panellists and the results were analysed using Friedman test. The highest overall acceptability was recorded by T5, contained 75% cinnamon and 25% ginger. The T5 was further assessed for the changes of physicochemical properties for one month at the room temperature, and data obtained were analysed using one-way ANOVA. Microbial quality (aerobic plate count, yeast and mold, *E. coli*, coliform and salmonella) was tested for one month period. According to the results of nutrient analysis, the selected product is free from cholesterol and consists with  $6.7 \pm 0.05$  % carbohydrate,  $0.3 \pm 0.02$  % protein and 2.1g of dietary fibre, and 64 kcal per 100g of beverage. The selected coconut milk beverage (T5) consists with  $4.60 \pm 0.01$  pH,  $10.50 \pm 0.00^\circ$  Brix value,  $1.70 \pm 0.01\%$  fat,  $0.225 \pm 0.000\%$  FFA,  $0.005 \pm 0.000\%$  TA and  $88.52 \pm 0.01\%$  moisture. During storage, no significant differences ( $P > 0.05$ ) were observed in pH, brix, FFA and moisture. However, fat% and TA of the product showed a significant difference ( $P < 0.05$ ) over the storage. There was no observed microbial growth in the product during storage. In conclusion, the best cinnamon: ginger ratio to develop nutritious spiced coconut milk beverage is 75%:25%.

**Keywords:** Spiced coconut milk beverage, Cinnamon, Ginger, Value addition