



## DEVELOPMENT OF SUGAR-FREE CINNAMON BISCUITS AND EVALUATION OF ITS QUALITY CHARACTERISTICS

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Biscuits are a popular snack food consumed in Sri Lanka. Sugar-free biscuits with natural sweetening substances have become popular at present due to the health concern over high sugar foods. Cinnamon (*Cinnamomum zeylanicum*) contains a natural sweetening substance named mannitol in addition to its main active ingredient cinnamaldehyde. This study was carried out to develop sugar-free cinnamon biscuits and an evaluation of its quality characteristics. Biscuits were formulated partially replacing wheat flour with rice flour (100:0, 75:25, 50:50, 25:75, 0:100) and fully replacing sugar with cinnamon powder (5g, 10g, 15 g) and baked in an oven at 180 °C for 10 minutes. The prepared biscuits were subjected to physical, nutritional and sensory analysis to evaluate the suitability of biscuit for consumption. Based on the results of this analysis, formulation of wheat flour and rice flour (25:75) with cinnamon powder (15g) was found as the most preferred formulation. The nutritional content of this formulation is carbohydrate 56.02%, protein 5.76%, total fat 25.46%, ash 4.02% and fibre 5.07%. Results of sensory analysis revealed that there was no significant difference between wheat based flour sugar-free cinnamon biscuit and the developed composite sugar-free cinnamon biscuit. Aerobic plate count was zero during three months of storage period. Zip-lock bag can be selected as primary packaging due to its durability and paper board was selected as secondary packaging material due to eco-friendly attributes. In conclusion, cinnamon can be a potential source to replace sugar with good keeping and eating qualities.

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