

DEVELOPMENT OF CINNAMON
(Cinnamomum zeylanicum Blume)
INCORPORATED JACK FRUIT SEEDS ENERGY BAR

By



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Abstract

Energy bars are gaining recognition as well as appreciation these days due to their ready-to-eat nature, delicious taste, nutritional profile, and appealing look. Cereals play an important role in human diet and nutrition. The protein quality of cereals can be improved by combining it with other rich sources like jackfruit seeds.

The main objective of this study is to develop a jackfruit seeds energy bar incorporated with cinnamon. The present study will be carried out to produce a nutrition energy bar using jackfruit seeds, mung bean, kurakkan flour, honey, and butter with the incorporation of cinnamon. The main objective of this research is to develop a healthy energy bar using jackfruit seeds and other grain varieties incorporated with cinnamon. In addition, the proper methodology will be developed through the sensory evaluation. About 0.1% bark oil and 8% cinnamon powder were incorporated to formulate the energy bar respectively. The energy bars were then subjected to sensory, physical, nutritional, and microbial analysis to evaluate their quality and shelf life. For the sensory analysis, seven-point hedonic scale was used. Nutritional analysis was done for the bark oil and powder incorporated energy bar from sensory evaluation.

Results revealed that the cinnamon bark oil incorporated energy bar sample contained as, a protein of 4.47%, carbohydrate of 67.82%, fat of 0.62%, fiber of 18.36%, moisture content 8.71% and a powder incorporated energy bar includes protein of 3.80%, carbohydrate of 56.29%, fat 0.59%, fiber 18.51%, moisture content 20.80%. Shelf life studies were evaluated by using pH, color, water activity, and microbial count with three packaging materials namely, PET/LDPE, PET/MET/PP, and AL/LLDPE. In conclusion the cinnamon bark oil incorporated energy bar was found to be the best treatment for the research project in terms of nutritional and proximate analysis and the packaging material PET/AL/LLDPE was selected as best packaging material for further studies.

Keywords: *Artocarpus heterophyllus*, General nutrition, Energy bar, proximate analysis.

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