DEVELOPMENT OF A RICE BRAN INCORPORATED ENERGY RICH SNACK FOR SCHOOLERS

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Due to bulkiness of conventional Sri Lankan breakfast, many children at schooling age skip their breakfast and it can lead to poor nutritional status and ultimately affect their learning process. Therefore it is important to introduce an energy rich snack that is low in volume and containing comparatively high amount of nutrients. Rice bran is a nutrient rich by-product that remains underutilized. Objective of this study was to develop rice bran and fruit incorporated energy rich snack bar to meet the nutritional requirement of schoolers. Rice bran was heat stabilized by microwaving for 3-5 minutes and roasting for 2 minutes at 100 ^{0}C. Preliminary experiments including sensory evaluation were conducted to determine the optimum quantity of rice bran and a suitable fruit for the snack. The final product was packaged in triple laminated aluminium foil and subjected to proximate analysis. Total calorie in 100 g of product, % carbohydrate, amino acids, vitamins, fatty acids and mineral contents were calculated using secondary data available. Based on the sensory analysis results, 13.5% of rice bran and pineapple were selected as the best level of rice bran and fruit type in formulating the final product. Final snack bar consisted of 12% protein, 16.9% fat, 7.9% fiber, 7.1% ash, 3.8% moisture, 1323.7 kJ per 100 g total calories and 49.6% carbohydrate; higher carbohydrate and fat content compared to other snack bars available in the local market. It also contained high amount of amino acids such as glutamic acid, aspartic acid and leucine; minerals such as phosphorus, potassium and magnesium; and vitamins such as folate and niacin. Hence, rice bran could be effectively utilized to formulate a low cost, energy rich snack bar to fulfill the considerable daily nutrient requirement of the schoolers.

Key words: Nutrition, Rice bran, Snack bar