# DEVELOPMENT OF HIGH NUTRITIVE ROTI MIXTURE BY USING RICE FLOUR, WHEAT FLOUR, SOY FLOUR AND CORN FLOUR

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# ABSTRACT

Despite many achievements in health status of the people and socio-economic level, malnutrition continues to be a serious health concern. The present study was carried out to develop a nutritive flour mixture for making roti that can fulfill the energy requirements of those who depend on roti as their main meal.

This research study, a roti mixture was prepared by using rice flour, wheat flour, soy flour and corn flour as main raw materials. The first three roti samples were prepared by using different ratios of rice flour, wheat flour, soy flour and corn flour. Another two roti samples were prepared only by using rice flour and wheat flour. Accordingly, five samples were selected for sensory evaluation. The results of sensory analysis were analyzed using Kruskal Wallis test in MINITAB software. Proximate analysis and shelf life analysis was carried out for the finally selected treatment. Based on that, analysis of sensory evaluation third treatment selected as best final treatment. Proximate analysis was conducted for that selected roti samples and flour samples (composite flour, rice flour and wheat flour) to evaluate the nutrient values. The composite flour sample selected from the sensory analysis has the highest nutritive value. It contains 35 % rice flour, 15 % corn flour, 25 % wheat flour and 25 % soy flour. This final product contained 10.15 % moisture, 13.9 % crude protein, 4.11 % total fat, 1.79 % ash, 4.8 % crude fibre and 65.25 % carbohydrate. The energy value of the value added roti was higher than rice flour and wheat flour roti. Protein, fat, fibre and mineral content of composite flour roti was also higher than rice flour and wheat flour roti. The shelf life analysis for the final product was carried out for the first three months by testing the sensory attributes and microbiological counts. The sensory attributes had not deviated from the initial status. Microbiological counts were also within acceptable levels. Therefore, it can be concluded that the product can be kept for three months without any change in its quality. Finally, the product can be considered as a well-balanced low cost food which can be introduced to the society to fulfill nutritional Requirements of people.