DEVELOPMENT OF BISCUITS USING COMPOSITE FLOUR OF WHEAT, FINGER MILLET AND LASIA SPINOSE ENRICHED WITH GARLIC FLAVOR

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ABSTRACT

Nutrient deficiencies such as protein, energy, and malnutrition and micronutrient deficiency are major problems especially among children in developing countries including Sri Lanka. This study was aimed to development of biscuits using composite flour of wheat, Finger millet and *Lasia spinose* enriched with Garlic flavor.

Finger millet flour in the level of 10%, 20%, 30%, 40% were mixed with 40%, 30%, 20%,10% of *Lasia spinose* flour and constant amount of garlic powder was added to the same amount of wheat flour (50 %) for making the composite flour and biscuits were prepared. Biscuits prepared from 100% of wheat flour were used as control treatment. Treatments for biscuits prepared from composite flour vz .T1-100% wheat flour, T2- 50% wheat flour +10% Finger millet + 40% *Lasia spinose*, T3- 50% wheat flour + 20% Finfer miller + 30% *Lasia spinose*, T4- 50% wheat flour + 30% Finger millet + 20% *Lasia spinose*, T5 – 50% wheat flour + 40% Finger millet + 10% *Lasia spinose* and constant amount of garlic powder were added to each treatment .These treatments were subjected to analysis of Physical, Nutritional and Organoleptic Qualities to evaluate the suitability of these biscuits for consumption. Physical properties vz: diameter, thickness, and spread ratio Nutritional qualities vz-moisture, ash, protein, fat and were analyzed using the recommended standard AOAC methods. Analysis were carried out for the 3 replicates of each treatments. Organoleptic qualities were evaluated using a sensory panel consisting 30 semi trained panelists. The color, texture, taste, flavor and overall acceptability were evaluated using a seven point hedonic scale. Results of the nutritional and organoleptic

qualities were analyzed statistically by ANOVA using computer aided mini tab statically analysis package.

The physical properties of biscuits revealed that there were no significant differences between the treatments of biscuits. Nutritional analysis of the freshly prepared biscuits revealed that protein, and ash were increased from 4.82-5.76% and 0.71-0.85% respectively while moisture content and protein was decreased from 2.49-0.23% and 8.11-6.37% when increasing the finger millet flour10%-40% in the biscuits mixture. From the overall acceptability rating, the biscuits sample prepared from composite flour with 50% wheat, 20% finger millet and 30% *lasia spinose* enriched with garlic flavor had the highest mean value compared with other treatments. Based on the nutritional and organoleptic qualities. Therefore, it can be concluded that the biscuits prepared from the composite flour with 50% wheat flour, 20% finger millet flour and 30% *Lasia spinose* flour enriched with garlic flavor was the best treatment compared to other combination.

TABLE OF CONTENTS

Page No

LIST OF TABLES

Page No

LIST OF FIGURES

Page No

LIST OF PLATES

Page No