

Formulation and quality evaluation of cereals, legumes and greens based nutritious mix

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Nutrition plays a vital role for normal growth and to maintain physical and mental fitness throughout the life. So the present study was undertaken with the objective to develop nutritious mix rich in protein and other nutrients using household technologies. The three different treatments of nutritious mixes was formulated from malted food grains (wheat, ragi, greengram and soybean) along with roasted sesame seeds, drumstick leaves powder and jaggery. The physical properties were observed that bulk density ranged from (0.697 to 0.736 g/ml), true density (1.08 to 1.21 g/ml), water absorption index (2.37 to 3.50 g/g), water solubility index (4.63 to 4.75%), oil absorption capacity (1.27 to 1.31 ml/g) and swelling power (2.71 to 2.89 ml/g). The prepared nutritious mixes were investigated for essential amino acids and sensory qualities. The chemical characteristics such as moisture, acidity, energy, crude protein, carbohydrate, starch, crude fat, β -carotene content of all the treatments (T_1 , T_2 and T_3) ranged from 6.40 to 7.56g, 0.148 to 0.163g, 372 to 374.97 Kcal, 14.24 to 16.19 g, 59.18 to 62.56 g, 33.92 to 35.08 g, 7.16 to 7.85 g, 3240.74 to 3689.81 μ g per 100 g. Among the different treatments ash, fibre, calcium, phosphorus and iron content ranged from 4.05 to 4.10 g, 2.69 to 2.81g, 374.68 to 379.47 mg, 305.68 to 311.27 mg and 5.17 to 5.53 mg/100 g. Physiochemical properties of the formulated nutritious mixes were within the acceptable at laboratory and field level, low cost and may contribute to alleviating child malnutrition.

Key Words : Germination, Malting, Nutritious mix, Physical properties, Chemical composition, Sensory evaluation

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