

ABSTRACT

Nutritional Composition, Physical Qualities and Sensory Evaluation of Wheat Bread Supplemented with Oyster Mushroom

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The aim of this study was to evaluate nutritional, physical and sensory qualities of wheat-mushroom bread. Dried *Pleurotus ostreatus* mushrooms were processed into flour and mixed with wheat flour at 0, 5, 10 and 15% to develop bread. Moisture content, crude protein, crude fibre, fat, ash, minerals, amino acids and B-vitamins contents of wheat and wheat-mushroom breads were evaluated. Physical and sensory qualities of wheat and composite breads were also evaluated to determine consumer acceptability. Composite bread with 15% mushroom did not develop as the dough for this ratio did not form a visco-elastic dough. Moisture, total ash and protein contents of the composite breads increased with increasing mushroom content in the bread. Composite bread supplemented with 10% mushroom flour had highest moisture, protein and total ash contents. Carbohydrates content declined while fiber and fat contents did not change. Mineral composition of the composite breads increased with increasing mushroom supplementation except for magnesium, manganese and calcium contents. The contents of all amino acids and B-vitamins analyzed increased with addition of mushroom in bread. Sensory and physical qualities of bread declined with increasing amount of mushroom flour in composite bread. In conclusion, supplementing mushrooms in wheat bread increased protein, minerals, B-vitamins, amino acids contents of wheat-mushroom bread compared to wheat bread. Supplementing wheat flour with up to 10% mushroom flour produced baked products with high nutritional quality for improved health.

Keywords: Wheat-mushroom bread, nutritional quality, sensory evaluation.