Sensory evaluation and nutrient composition of noodles enriched with wood ear mushroom (Auricularia polytricha) powder

ABSTRACT

Edible mushrooms are highly nutritious and have been regarded as a functional ingredient to improve the nutritional value of consumer food product including noodles. The objective of this study is to explore the feasibility of incorporating different levels of wood ear mushrooms (Auricularia polytricha) powder into noodles formulations and to assess the sensory properties and nutritional value of the final formulation. Six formulations of noodles containing different percentages of wood ear mushroom (WEM) powder, 0% (F1), 5% (F2), 10% (F3), 15% (F4), 20% (F5), and 25% (F6) were prepared. Sensory evaluation was conducted to determine the best formulation of noodles enriched with mushroom. Nutrient composition consisted of proximate and mineral analyses were determined for the best formulation. The F2 was the best formulation based on the highest score in all five sensory attributes such as colour, aroma, taste, texture, and overall acceptance. The addition of 5% of WEM powder had significantly ($P<0.05$) increased the protein and ash content of the noodles. The mineral content of F2 with 5% WEM powder resulted in significantly ($P<0.05$) higher potassium, magnesium and iron content, significantly ($P<0.05$) lower zinc content while sodium and calcium content were insignificantly ($P>0.05$) different from control. In conclusion, WEM powder can be incorporated to improve the nutritional value of noodles and 5% additions of WEM powder sensory attributes were found to be acceptable.