DEVELOPMENT AND QUALITY EVALUATION OF OYSTER MUSHROOM (*PLEUROTUS OSTREATUS*) FLOUR BASE NOODLES PRODUCT

P.N.G.V.JAYANATH

DEPARTMENT OF BIOSYSTEMS TECHNOLOGY

FACULTY OF TECHNOLOGY

EASTERN UNIVARSITY

SRI LANKA

DECEMBER 2021

ABSTRACT

Mushrooms are essential food in human nutrition since they have a high protein, mineral, and vitamin content, as well as a low fat and energy content. They provide a protein supply for people who are unable to ingest animal foods for various reasons. They're also thought to be a beneficial dietary product because of their low fat and energy content. Mushrooms are taken for medical reasons as well as for edible purposes. Because of its short shelf life and perishability, all the variety of mushrooms cannot be stored for a long time. Mushrooms have a high moisture content and are sensitive, then they can only be stored for 24 hours at room temperature (25°C to 30°C). As a result, postharvest activities require extra attention.

Noodles are the most popular food item among all age groups, with a long shelf life and high commercial value. The present study was conducted to compare nutritive value of developed oyster mushroom flour base noodles sample with that of control noodles sample. Oyster mushroom was selected as mushroom variety and T1-oyster mushroom flour 0:100 wheat flour, T2- oyster mushroom flour 10:90 wheat flour, T3-oyster mushroom flour 20:80 wheat flour, T4- oyster mushroom flour 30:70 wheat flour and T5- oyster mushroom flour 50:50 wheat flour were used as different ratio for prepared the oyster mushroom noodles product.

Physico-chemical analysis was conducted using AOAC Methods to determine the moisture content, protein content, fat content, ash content and pH of oyster mushroom flour base noodles product. Sensory evaluation was conducted to evaluate organoleptic characteristics of the same. The appearance, color, taste, texture, aroma and overall acceptability were evaluated using a nine-point hedonic scale. Significance differences at 5% level were observed in physico-chemical composition viz moisture content, protein content, fat content, ash content, and pH of oyster mushroom flour base noodles products. The sensory evaluation is revealed by comparative graph for evaluate the color, taste, texture, aroma and overall acceptability.

The results revealed that T2 noodles sample (mushroom flour 10: wheat flour 90) has the highest appearance, color, texture, taste, and aroma, therefore, the overall acceptance. According to Tukey test, T5 noodles sample (mushroom flour 50: wheat flour 50) showed the best results in physico-chemical analysis among the four oyster mushroom flour base noodles sample and the control one; whereas the T2 noodles sample (mushroom flour 10: wheat flour 90) was the best compared to other mushroom noodles sample and with control noodles sample based in Physico-chemical and organoleptic qualities.

Therefore, it can be concluded that the T2 mushroom noodles (oyster mushroom flour 10:90 wheat flour) sample is the best for maintaining the physico-chemical and organoleptic qualities. Oyster mushroom flour base noodles product was enhanced value of mushrooms and enrich the noodles product.

CONTENT

LIST OF TABLES

LIST OF FIGURES