

ABSTRACT

THE INFLUENCE OF TYPES AND CONCENTRATIONS OF BINDING MATERIALS TO CHEMICAL AND ORGANOLEPTIC CHARACTERISTICS OF WHITE OYSTER MUSHROOM (*PLEUROTUS OSTREATUS*) *NUGGET*

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Nugget is a processed minced meat product with some spices, and then it is mixed with binding materials, molded into particular shapes, and finally coated with bread flour, fried half done, and frozen. One of protein source alternatives for substituting meat is diversification of white oyster mushroom to be white oyster mushroom *nugget* that can be used as a source of vegetable protein. The objective of this research is to obtain types and concentrations of binding material with best chemical and organoleptic characteristics.

This research is composed in factorial with completely randomized group design in three repetitions. The main factor is the binding material (T) consisting of three levels; they are tapioca (T1), wheat flour (T2), and sago flour (T3). The second factor is the concentration of binding material (K) consisting of three levels; they are 5% (K1), 10% (K2), and 15% (K3). Homogeneity is tested using Bartlett test, and data additivity is tested using Tukey test. Data are analyzed using analysis of variance to obtain error predictor and significance test to find out the influences of treatments. Data is analyzed further using comparison and orthogonal polynomial at 5% and 1% levels.

The results showed that the type and concentration of binder significantly influences and there is interaction between the type and concentration of the binder to the protein, fat, and carbohydrate content, color, aroma, flavor, texture and overall acceptance. The addition of tapioca with a concentration of 10% addition of tapioca is the best treatment in the production of white oyster mushroom nuggets with brownish yellow color, aroma and distinctive oyster mushroom flavor, soft texture, and overall acceptance, with 73,13% moisture content, protein content 7,64%, 0,98% fat content and carbohydrate content of 17,74%.

Keywords: *nugget*, binding material, white oyster mushroom