

# **INFLUENCE OF THE WHEAT AND COWPEA FLOUR SUBSTITUTION ON PHYSICAL, CHEMICAL PROPERTIES AND PREFERENCES OF CATFISH NUGGETS.**

## **ABSTRACT**

One type of fish that is relatively inexpensive and has a high protein is catfish. To increase the added value and durability of catfish can be made by processed products such as fish nuggets. Allegedly use catfish nuggets that will produce nuggets softer. To improve the texture could be expected to do by substituting flour with cowpea flour as a binder. At certain degree of substitution is expected to obtain catfish nugget with good physically and chemically as well as preferred by the panelist. The aim of this study is to determine the rate of substitution of cowpea flour to wheat flour in the physical, chemical, and preference level of catfish nugget produced and determine the level substitution of cowpea flour to produce a good catfish nugget. Catfish nugget made with catfish meat, spices, and a binder with substitution rate of 0, 25, 50, 75, and 100%. Stages of making nugget is grinding, mixing, molding, steaming, cooling, slicing, coating, and frying. Catfish nugget that ready to serve were analyzed physically (texture and colour), chemically proximate test and rate of their predilection. Data were gained, then analyzed the variants and if there is a significant difference will be continued by DMRT. The results showed higher levels of cowpea flour then the level of density, the level of browning, water-content, ash content, the higher protein content, while the degree of deformation, the fat content, the lower carbohydrate content. The best product produced by the substitution level of cowpea toward wheat flour at 50% with water-content of 48,68% w/w, ash content 4,70% w/k, protein content 31,64% w/k, fat level 26,07% w/k and carbohydrate content 37,59% w/k.

Keywords : Catfish, cowpea, nugget, substitution level.