



Malays. Appl. Biol. (2020) 49(3): 61–69

QUALITY EVALUATION OF IMITATION CHICKEN NUGGETS

FROM GREY OYSTER MUSHROOM STEMS

AND CHICKPEA FLOUR

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Accepted 3 September 2020, Published online 25 October 2020

ABSTRACT

This study was conducted to evaluate the quality of imitation chicken nuggets or ICNs formulated with grey oyster mushroom stems and chickpea flour. Four formulations of ICNs were prepared with the percentage of mushroom stems to chickpea flour were: A (60%:10%), B (55%:15%), C (50%:20%), and D (45%:25%). A commercial brand of chicken nugget was chosen as control experiment. All nuggets were analysed for nutritional and cooking properties as well as consumer preference.

Results found that protein, fat, and carbohydrate contents of all ICNs were significantly lower ($p < 0.05$) than control chicken nugget. However, the moisture, and crude fibre of all ICNs were significantly higher ($p < 0.05$) than control chicken nugget.

Results also showed that ICNs were significantly lower ($p < 0.05$) in cooking loss but were significantly higher ($p < 0.05$) in

cooking yield and moisture retention than control chicken nugget. Hedonic test found that consumers did significantly prefer

($p < 0.05$) control chicken nugget compared to all ICNs in attributes chicken aroma, texture, juiciness, taste, and overall acceptance

as expected. The ICN B which contained 55% of grey oyster mushroom stems and 15% chickpea flour was the most preferred

by consumers in terms of texture, juiciness, taste, and overall acceptance compared to all ICNs. This finding suggested that

grey oyster mushroom stems and chickpea flour have a great potential as alternative ingredients in ICNs formulation.

Key words: Imitation chicken nugget; vegetarian nugget; mushroom nugget; chicken nugget preference