

**DEVELOPMENT OF LESS FAT CHICKEN  
NUGGETS WITH PRE-FRYING  
AND WITHOUT PRE-FRYING  
STEP USING DIFFERENT  
FLOUR**

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## ABSTRACT

The main objective of this study was to compare the effects of different flour types on quality of deep-fat fried chicken nuggets. Additionally, the quality of deep-fat fried chicken nuggets with pre-frying and without pre-frying steps was compared. In the first part of the study, to examine the effects of different flours, 15% of the dry flour mix was substituted with soy, rice and rice-soy flour. A batter formulation with no flour addition was used as control. Sensory evaluation using the nine point-hedonic scale was carried on to evaluate the chicken nuggets in terms of appearance, aroma, flavour, texture, oiliness, crispiness and the overall acceptability. After sensory evaluation, proximate analysis and a microbiological test on each sample were performed. As a result of the study, among the flour types used, 15% soy flour added batter without pre-frying step (15S-WPF) was found to be most effective ingredient on improving quality parameters of deep-fat fried chicken nuggets. The 15S-WPF added batters provided the highest oil reduction of fried chicken nuggets with the lowest oil content at 9.90% and the highest moisture retention at 57.12% significantly. During hedonic test, the 15% rice-soy flour added batter without pre-frying step (15RS-WPF) achieved the highest overall acceptability among the panelists. However, the best formulation should be based on the chemical analysis. So 15S-WPF can be advised to be used in batter formulations for chicken nuggets as it was more effective in the reduction of oil in deep-fat fried chicken nuggets when compared to the control batter. In microbiological test, the overall results from the total plate count fulfill the safety limit requirement of not exceeding  $5 \times 10^4$  CFU/g in accordance to the Malaysia Food Act and Regulation (2007).

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