

ABSTRACT

Anita Anasthasya. Analysis of Nutrient Content of Stick Substituted Flour byproducts of Peeled Shrimp Business. Thesis. Nutrition Study Program. Department of Family Welfare Education. Faculty of Engineering. State University of Medan. 2023.

As shrimp production in Indonesia increases, so does the waste generated from the shrimp processing process. This study aims to determine: 1) Making shrimp skin stick with 15%, 30%, and 45% formula; 2) Results of hedonic test and hedonic quality test on color, aroma, taste, and texture of shrimp skin stick; 3) The best formula of shrimp skin stick; 4) Nutrient content of shrimp skin stick with the best formula; 5) Results of microbiological contamination test and metal contamination of shrimp skin stick with the best formula; 6) Nutritional contribution as a snack food from shrimp skin stick. This experimental research used the RAL (Completely Randomized Design) method. There were 4 treatments, namely F0/control (0%), F1 (15%), F2 (30%), and F3 (45%). The research location was carried out at the Faculty of Engineering, State University of Medan, Medan Industrial Services Standardization and Services Center (BSPJI), and the Regional Health Laboratory of Deli Serdang Regency. Data analysis techniques were analyzed descriptively and Kruskal Wallis test, followed by Mann Whitney test.

The results showed that shrimp skin stick with 70% wheat flour formula and 30% peeled shrimp by-product flour (sample code F2) produced the best product. Hedonic test results (sample code F2 70%: 30%) panelists liked the taste 66.7%, liked the color 56.7%, liked the texture 53.3%, and liked the aroma 66.7%. Hedonic quality test results panelists liked the savory taste of shrimp 56.7%, liked the light brown color 73.3%, liked the crunchy texture 56.7%, and liked the aroma of shrimp 60%. The best formula of shrimp skin stick obtained an average of 3.93; color 3.97; texture 4.2; and aroma 4.07. The nutritional content of the best formula shrimp skin stick was 15.8% protein, 30.2% carbohydrate, 38.1% fat, 2.68% water, 6.89% ash, 773 mg/kg calcium, and 64.4 mg/kg sodium. Microbial contamination and metal contamination of shrimp skin sticks in the best formula were total plate count 56,101 Cfu/gr, negative salmonella, *E. coli* < 3.6 APM/gr, lead < 0.0017 mg/kg, and cadmium 0.003 mg/kg, making it safe for consumption. 10 grams of sticks consumed can contribute 1.6 grams of protein so that it can meet the 26.7% intermediate protein requirement, 3.8 grams of fat so that it can meet the 56.7% intermediate fat requirement, and 3 grams of carbohydrates so that it can meet the 9.2% intermediate carbohydrate requirement.

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