ABSTRACT

Development of Mackerel Nuggets as a Potential Supplementary Food to Support Stunting Prevention

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Background : Stunting remains a significant nutritional problem in Indonesia. Providing animal protein-rich supplementary foods is one strategy to support its prevention. Mackerel, a rich source of animal protein, can be processed into convenient nuggets.

Objective : This study aimed to develop mackerel nuggets as a potential supplementary food to support stunting prevention.

Research Methods/ Implementation Methods : This study used a laboratory experimental design with a sensory acceptability test. Product development used mackerel as the main ingredient. The estimated nutritional content was calculated based on the Indonesian Food Composition Table. Acceptability testing was conducted using a five-point hedonic scale, evaluating color, taste, aroma, texture, and overall acceptance by 53 panelists with inclusion criteria were young adults aged 18–35 years, having no sensory impairment, non-smokers, no allergies or intolerances to fish, having previously consumed nuggets, willing to try and evaluate the formula samples according to the testing procedure, and able to read and complete the evaluation form correctly.

Results : : The estimated nutritional composition per 100 grams of nuggets was 225.2 kcal of energy, 10.0 g of protein, 15.6 g of fat, and 12.1 g of carbohydrates. Based on the sensory acceptability test, acceptance rates were 90.6% for color, 81.1% for texture, 75.5% for taste, 69.8% for aroma, and 79.2% for overall acceptance.

Conclusion/Lesson Learned : Mackerel nuggets may serve as an alternative animal protein-based supplementary food to support stunting prevention. However, formulation improvements, particularly regarding taste and aroma, are necessary by utilizing natural spices to reduce the fishy odor and dominant fish flavor, thereby producing a savorier product.

Keyword : Acceptability; Animal Protein; Hedonic; Mackerel Nuggets; Stunting