

FISH-BASED FROZEN FOOD DEVELOPMENT AS AN EFFORT TO OVERCOME STUNTING

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ABSTRACT

Stunting is a condition in which toddlers have less length or height compared to age. Riskesdas 2018 data shows the stunting rate is 30.8%. The causes of stunting include chronic energy deficiency and can be prevented by providing foods high in calories, protein and micronutrients (TKPM) for young women, pregnant women, and children under two years of age. Fish is an animal food ingredient that contains high protein, however the fish consumption of Indonesian people is still low. Increasing fish consumption through the manufacture of products containing fish meal is expected to produce TKPM food that can overcome stunting.

This study aims to: 1) find the process of making fish meal rich in protein from tilapia, 2) find the right formula for fish-based frozen food products, 3) determine the nutritional content of fish-based frozen food products, 4) determine consumer preferences for the product fish-based frozen food, and 5) knowing the expiration time of fish-based frozen food products.

The research was carried out from February to August 2020 with the following stages: 1) making tilapia fish meal, 2) determining the reference formula for ravioli, pizza, and fettuccini, 3) designing the formula for tilapia ravioli, pizza and fettuccini, 4) sensory testing by trained panelists for determination of the best formula for ravioli, pizza, and fettuccini with tilapia flour, 5) sensory testing of somewhat trained and untrained panelists for determining consumer preference levels, 6) testing of color, water activity, texture, proximate, and calcium in ravioli, pizza and fettuccini products, 7) determining nutritional value information, and 8) determining expiration time. Data analysis was performed by one-way analysis of variance (ANOVA) with a 95% confidence level. If there is a significant difference, the follow-up test is carried out with the DMRT (Duncan Multiple Range Test).

The results showed that: 1) The process of making protein-rich fish meal through the following stages: cleaning the contents, washing, steaming, squeezing with a filter cloth, drying meat and bones, grinding, and sieving, 2) The right formula for ravioli and fettuccini with fish meal as much as 20%, pizza with 15% fish meal, 3) Tilapia fish meal ravioli contains% protein content, 20% tilapia fish flour fettuccini contains protein content, 15% tilapia fish flour pizza contains% protein content, 4) Consumer's favorite level against 20% fishmeal ravioli was 3.53; a 20% fishmeal fettuccini was 3.5; and 15% fish meal pizza is 3.43 from a maximum score of 5, 5) The expiration time of fish-based frozen food products is more than 2 months.

Kata Kunci: *frozen food, fish, stunting, pizza, fettuccini, ravioli*