

ABSTRACT

The high popularity among consumers for chicken nugget has left the consumption of chicken nugget increasing. However, the production itself has contributed to the environmental impacts and animal welfare. Nowadays, the trend of flexitarian diet has attracted plant-based meat products to be produced, since it can attract general consumers to shift their diet due to the similarities in the texture, aroma, appearance, taste, and nutritional properties compared to the real meat. Texturized vegetable protein (TVP) has been used in food applications to construct plant-based meat products. However, the high energy cost to produce TVP leaves the price of TVP is quite expensive. Therefore, tempeh is chosen as an alternative not only for cheap prices, but also has several nutritional benefits. This experiment aims to see the effect of substitution and/or partial substitution of TVP using tempeh on the nutritional and textural properties of plant-based nuggets. Plant-based nuggets were made by adapting formulations with slight modifications, whereas chicken nuggets were purchased from stores. Nutritional (carbohydrate, protein, fat, moisture, and ash) analysis and textural (hardness) analysis are the parameters that are assessed. From the results, none of the treatments were found to have significant differences toward the nutritional and textural properties. To be concluded, the tempeh treatments could not improve the nutritional and textural properties toward plant-based nuggets, but could mimic the properties toward commercial chicken nuggets. To improve the experiment, increasing sample size, performing vitamin and mineral analysis, and changing the experimental designs and procedures would be recommended.

Keywords: Plant-based nugget, tempeh, TVP, nutritional properties, textural properties