EVALUASI KIMIA DAN KARAKTERISTIK SENSORIS TEMPE KORO PEDANG PUTIH (*Canavalia ensiformis* (L.) DC.) DENGAN BERBAGAI METODE PENGASAMAN

INTISARI

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Keterbatasan ketersediaan kedelai dalam negeri mendorong upaya diversifikasi bahan baku tempe dengan memanfaatkan legum lokal, seperti koro pedang putih (*Canavalia ensiformis* (L.) DC.). Dalam proses pembuatan tempe, tahapan pengasaman berperan penting dalam menurunkan pH sehingga mendukung pertumbuhan kapang *Rhizopus* selama fermentasi. Penelitian ini bertujuan untuk menganalisis pengaruh metode pengasaman dan pengukusan terhadap komposisi proksimat serta mengevaluasi karakteristik sensoris tempe koro pedang putih berdasarkan atribut kenampakan, aroma, rasa, dan tekstur. Metode pengasamannya yaitu perendaman dengan *tap water* (60 jam), perendaman dengan air sisa perendaman dan perebusan (24 jam), dan perebusan dengan larutan asam laktat 0,5% (1 jam). Tempe komersial digunakan sebagai referensi. Analisis proksimat meliputi kadar protein, abu, lemak, dan karbohidrat *by difference*. Pengujian sensoris menggunakan *Multisample Difference Test* dengan *rating test* serta dilakukan analisis *Principal Component Analysis* (PCA).

Hasil penelitian menunjukkan bahwa perbedaan metode pengasaman berpengaruh signifikan terhadap kadar abu dan lemak (p<0,05). Pengukusan menyebabkan penurunan kadar protein, karbohidrat, dan kadar abu sebagian sampel (p<0,05). Evaluasi sensoris menunjukkan bahwa metode pengasaman mempengaruhi nilai intensitas atribut kekompakan, rasa (gurih, pahit, kacang, asam), dan aroma fermentasi (p<0,05). Penelitian ini menunjukkan bahwa pemilihan metode pengasaman berperan penting dalam menentukan kualitas kimia dan sensoris tempe koro pedang putih serta berpotensi dalam pengembangan tempe koro pedang putih.

Kata kunci: tempe koro pedang putih, pengasaman, proksimat, karakteristik sensoris, PCA

CHEMICAL AND SENSORY EVALUATION OF JACK BEAN TEMPEH (*Canavalia ensiformis* (L.) DC.) USING DIFFERENT ACIDIFICATION METHODS

ABSTRACT

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Limited domestic soybean availability has encouraged the diversification of tempeh rawe material using local legumes such as jack bean (*Canavalia ensiformis* (L.) DC.). In tempeh production, the acidification stage is a critical step that lowers of the pH of the substrate and facilitates the growth of *Rhizopus* during fermentation. This study aimed to evaluate the effects of different acidification methods and steaming treatment on the proximate composition and sensory characteristics of jack bean tempeh. Three acidification methods were applied: soaking in tap water (60 h), soaking in residual soaking and boiling waters (24 h), and boiling in 0,5% lactic acid solution (1 h). Commercial tempeh was included as a reference sample. Proximate analysis was conducted to determine protein, ash, fat, and carbohydrate contents (by difference). Sensory characteristics were evaluated using a Multisample Different Test with rating test and Principal Component Analysis (PCA) was performed to explore the relationships between samples and sensory attributes.

The results showed that acidification methods significantly affected ash and fat contents (p<0,05), while steaming treatment significantly reduces protein, carbohydrate, and ash content (p<0,05). Sensory evaluation indicated that acidification methods influenced the intensity of compactness, taste, and fermented aroma, but did not significantly affect color intensity, nutty aroma, hardness, or cohesiveness (p>0,05). The study demonstrate that the choice of acidification method plays an important role in determining the chemical composition and sensory quality of white jack bean tempeh, highlighting its potential for the development of alternative tempeh products based on local legumes.

Keywords: white jack bean tempeh, acidification, proximate composition, sensory characteristic, PCA.