

## **ABSTRACT**

### **THE EFFECT OF COOKING METHODS ON THE NUTRITIONAL VALUE AND SENSORY PROPERTIES OF MOSACCHA TEMPEH**

**By**

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The effect of cooking methods on the nutritional value and sensory properties of Mosaccha tempeh, tempeh produced through soybean fermentation using a mixed inoculum of *Rhizopus oligosporus* and *Saccharomyces cerevisiae*, was studied using several cooking techniques. The methods included boiling, steaming, shallow frying, deep frying, and grilling, with uncooked tempeh serving as the control. The experiment was arranged using a Randomized Complete Block Design (RCBD) with six treatments and four replications. The observed parameters included moisture content, fat content, and sensory properties comprising aroma, texture, and color. Data were analyzed using analysis of variance (ANOVA) followed by the Honest Significant Difference (HSD) test at a 5% significance level. The results showed that differences in cooking methods significantly affected moisture content, fat content, and the sensory characteristics of Mosaccha tempeh. Wet cooking methods resulted in higher moisture content and lower fat content, while frying and deep frying reduced moisture content but significantly increased fat content. Based on the weighted effectiveness method, the best treatment was obtained from Mosaccha tempeh prepared by shallow frying, with a moisture content of 38.01% (wet basis) or 61.31% (dry basis), fat content of 28.06% (wet basis) or 45.26% (dry basis), protein content of 20.49% (wet basis) or 33.05% (dry basis), crude fiber content of 12.84% (wet basis) or 20.71% (dry basis), and ash content of 0.77% (wet basis) or 1.24% (dry basis). This treatment also exhibited color, texture, and aroma characteristics that were preferred by the panelists.

Keywords: cooking methods, nutritional value, sensory properties, Mosaccha tempeh

## **ABSTRAK**

### **PENGARUH CARA PEMASAKAN TERHADAP NILAI GIZI SERTA SIFAT SENSORI TEMPE MOSACCHA**

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Pengaruh cara pemasakan terhadap nilai gizi dan sifat sensori tempe Mosaccha, yaitu tempe hasil fermentasi kedelai menggunakan inokulum campuran *Rhizopus oligosporus* dan *Saccharomyces cerevisiae*, dikaji melalui beberapa metode pemasakan. Metode yang digunakan meliputi perebusan, pengukusan, penggorengan biasa, deep frying, dan pemanggangan, dengan tempe tanpa pemasakan sebagai kontrol. Percobaan disusun menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan enam perlakuan dan empat ulangan. Parameter yang diamati meliputi kadar air, kadar lemak, serta sifat sensori yang mencakup aroma, tekstur, dan warna. Data dianalisis menggunakan analisis sidik ragam dan dilanjutkan dengan uji Beda Nyata Jujur (BNJ) pada taraf 5%. Hasil menunjukkan bahwa perbedaan cara pemasakan berpengaruh nyata terhadap kadar air, kadar lemak, dan karakteristik sensori tempe Mosaccha. Pemasakan basah menghasilkan kadar air tinggi dan kadar lemak rendah, sedangkan penggorengan dan deep frying menurunkan kadar air namun meningkatkan kadar lemak secara signifikan. Berdasarkan metode efektivitas pembobotan, perlakuan terbaik diperoleh pada tempe Mosaccha dengan metode penggorengan biasa, dengan kadar air sebesar 38,01% (bb) atau 61,31% (bk), kadar lemak sebesar 28,06% (bb) atau 45,26% (bk), kadar protein 20,49% (bb) atau 33,05% (bk), kadar serat kasar 12,84% (bb) atau 20,71% (bk), dan kadar abu sebesar 0,77% (bb) atau 1,24% (bk), serta memiliki karakteristik warna, tekstur, dan aroma yang disukai panelis.

Kata kunci: pemasakan, nilai gizi, sifat sensori, tempe mossacha