ABSTRACT

THE EFFECT OF ADDING MORINGA SEED TEMPEH (*Moringa oleifera*) ON THE CHEMICAL AND SENSORY CHARACTERISTICS OF PEANUT BRITTLE

By

Amelia Agusalna

Peanut brittle is a traditional snack with relatively high sugar and fat content, therefore requiring innovation to improve its nutritional value. The addition of moringa seed tempeh (*Moringa oleifera*), which is rich in protein and antioxidant compounds derived from fermentation, can improve the nutritional value of the product. This study aimed to determine the effect of adding moringa seed tempeh on the chemical and sensory characteristics of peanut brittle and to identify the best treatment. The study employed a Randomized Complete Block Design (RCBD) with six treatments: P0 (0 g), P1 (4 g), P2 (7 g), P3 (10 g), P4 (13 g), and P5 (16 g), each with three replications. The observed parameters included moisture content, ash content, and sensory evaluation (scoring and hedonic tests) covering aroma, color, texture, and taste. Data were analyzed using Analysis of Variance (ANOVA) followed by the Honestly Significant Difference (HSD) test at a 5% significance level. The results showed that the addition of moringa seed tempeh had no significant effect on moisture content, but had a significant effect on ash content and sensory attributes. The best formulation was obtained at the addition of 7 g moringa seed tempeh (P2), which achieved the highest score in the effectiveness index test. Peanut brittle with this treatment contained 20.13% protein, 48.46% antioxidant activity, and 1.32% ash content, which met the SNI standards. However, the fat content (31.73%) and moisture content (5.69%) exceeded the maximum allowable limits.

Keywords: *peanut brittle, moringa seed tempeh.*

ABSTRAK

PENGARUH PENAMBAHAN TEMPE BIJI KELOR (*Moringa oleifera*) TERHADAP KARAKTERISTIK KIMIA DAN SENSORI ENTING-ENTING KACANG

Oleh

Amelia Agusalna

Enting-enting kacang merupakan makanan ringan tradisional dengan kandungan gula dan lemak yang cukup tinggi, sehingga perlu inovasi untuk meningkatkan nilai gizinya. Penambahan tempe biji kelor (*Moringa oleifera*) yang kaya protein dan senyawa antioksidan hasil proses fermentasi dapat menjadi salah satu upaya peningkatan nilai gizi produk. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan tempe biji kelor terhadap karakteristik kimia dan sensori enting-enting kacang serta menentukan perlakuan terbaik. Penelitian menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan 6 perlakuan, yaitu P0 (0 g), P1 (4 g), P2 (7 g), P3 (10 g), P4 (13 g), dan P5 (16 g) dengan 3 ulangan. Parameter yang diamati meliputi kadar air, kadar abu, serta uji sensori (skoring dan hedonik) yang mencakup aroma, warna, tekstur, dan rasa. Data dianalisis menggunakan analisis sidik ragam dan dilanjutkan dengan uji BNJ pada taraf 5%. Hasil penelitian menunjukkan bahwa penambahan tempe biji kelor tidak berpengaruh nyata terhadap kadar air, namun berpengaruh nyata terhadap kadar abu serta atribut sensori. Formulasi terbaik diperoleh pada perlakuan dengan penambahan tempe biji kelor 7 g (P2), yang menghasilkan skor tertinggi pada uji indeks efektivitas. Enting-enting kacang dengan perlakuan ini mengandung kadar protein sebesar 20,13%, antioksidan 48,46%, dan kadar abu 1,32%, yang masih memenuhi standar SNI, namun kadar lemak (31,73%) dan kadar air (5,69%) melebihi batas maksimum yang ditetapkan.

Kata kunci: enting-enting kacang, tempe biji kelor.