

**FORMULASI KEFIR SUSU KEDELAI (*Glycine max*) DENGAN
PENAMBAHAN BUBUK DAUN KELOR (*Moringa oleifera*) DAN LAMA
PENYIMPANAN DINGIN TERHADAP SIFAT FISIKOKIMIA DAN
KANDUNGAN PROTEIN**

SKRIPSI



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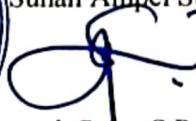
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ABSTRAK

Kefir susu kedelai merupakan minuman fermentasi berbasis nabati yang memiliki potensi sebagai pangan fungsional karena mengandung probiotik dan senyawa gizi yang bermanfaat bagi kesehatan. Penambahan bubuk daun kelor dilakukan untuk meningkatkan nilai gizi serta kualitas produk kefir susu kedelai. Penelitian ini bertujuan untuk mengetahui perbedaan nilai fisikokimia dan kandungan protein pada kefir susu kedelai dengan penambahan bubuk daun kelor selama penyimpanan dingin. Penelitian menggunakan metode eksperimen laboratorium dengan perlakuan konsentrasi bubuk daun kelor 0%, 1%, dan 3% serta lama penyimpanan 0, 7, dan 14 hari. Parameter yang dianalisis meliputi pH, Total Padatan Terlarut (TPT), Total Asam Tertitrasi (TAT), kadar alkohol, sineresis, dan kadar protein. Data dianalisis menggunakan uji *Two-Way ANOVA* dan *Post Hoc Tukey HSD*. Hasil penelitian menunjukkan bahwa konsentrasi bubuk daun kelor dan lama penyimpanan berpengaruh signifikan ($p < 0,05$) terhadap seluruh parameter. Nilai pH dan Total Padatan Terlarut (TPT) menurun selama penyimpanan, sedangkan Total Asam Tertitrasi (TAT), kadar alkohol, dan sineresis meningkat. Kadar protein meningkat hingga hari ke-7 kemudian menurun pada hari ke-14. Formulasi terbaik diperoleh pada penambahan bubuk daun kelor 1% dengan lama penyimpanan 7 hari karena menghasilkan kadar protein tinggi sebesar 5,85% (5,85 gr) dan karakteristik fisikokimia yang lebih stabil (pH=4,21; TPT=7,2°Brix; TAT=0,98%, Alkohol=0,49%; Sineresis=36,5%).

Kata kunci: daun kelor, fisikokimia, kefir susu kedelai, protein.

ABSTRACT

Soy milk kefir is a plant-based fermented beverage that has potential as a functional food due to its probiotic and beneficial nutritional content. The addition of moringa leaf powder was carried out to improve the nutritional value and quality of soy milk kefir. This study aimed to determine the effect of moringa leaf powder addition and storage duration on the physicochemical properties and protein content of soy milk kefir. This research used a laboratory experimental method with treatments of moringa leaf powder concentrations of 0%, 1%, and 3% and storage periods of 0, 7, and 14 days. The parameters analyzed included pH, Total Dissolved Solids (TDS), Total Titratable Acidity (TTA), alcohol content, syneresis, and protein content. Data were analyzed using Two-Way ANOVA and Tukey HSD Post Hoc test. The results showed that moringa leaf powder concentration and storage duration had a significant effect ($p < 0.05$) on all parameters. The pH and TDS values decreased during storage, while TTA, alcohol content, and syneresis increased. Protein content increased until day 7 and then decreased on day 14. The best formulation was obtained from 1% moringa leaf powder with 7 days of storage because it produced high protein content 5,85% (5,85 gr) and more stable physicochemical characteristics (pH = 4,21; Total Soluble Solids (TSS) = 7,2 °Brix; Total Titratable Acidity (TTA) = 0,98%; Alcohol Content = 0,49%; Syneresis = 36,5%).

Keywords: moringa leaf, physicochemical, protein, soy milk kefir

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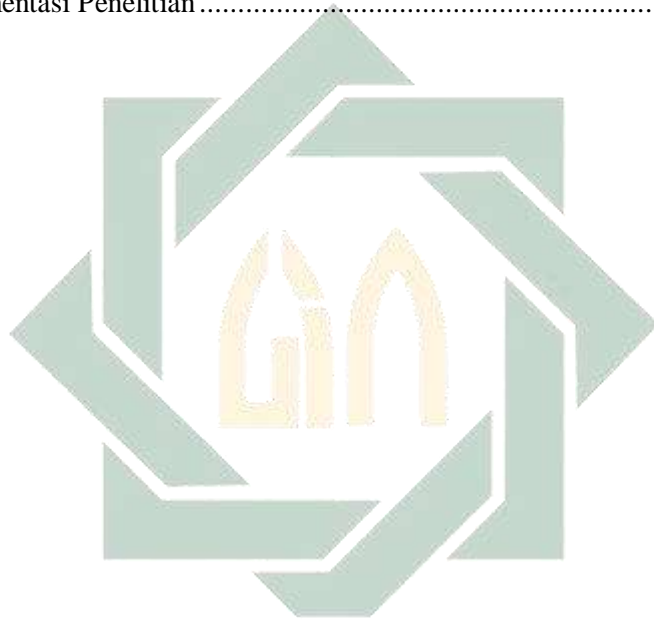
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