

ABSTRAK

PROTEIN TERLARUT, VITAMIN C, DAN MUTU HEDONIK SUSU KECAMBAH KORO PEDANG PUTIH, EKSTRAK JAHE GAJAH, DAN SERAI SEBAGAI MINUMAN ALTERNATIF UNTUK DIABETES MELITUS TIPE II

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Latar Belakang: Susu nabati yang terbuat dari kecambah koro pedang putih ekstrak jahe gajah dan serai dapat dijadikan sebagai minuman alternatif untuk penderita Diabetes Melitus tipe 2 karena mengandung protein dan vitamin C. Penelitian ini bertujuan untuk mengetahui pengaruh susu kecambah koro pedang putih dengan penambahan ekstrak jahe gajah dan serai terhadap kadar protein terlarut, vitamin C, dan mutu hedonik (rasa, aroma, warna, dan tekstur) susu nabati.

Metodologi: Penelitian ini menggunakan metode rancangan acak kelompok (RAK) Eksperimental Non-Faktorial. Faktor perlakuan proporsi Air: Kecambah: Jahe: Serai terdiri dari 3 formula yaitu F1 (1:10:10:12,5), F2 (1:12,5:8:10), F3 (1:16,67:6:7,5) dengan 6 kali pengulangan. Analisis statistik kadar protein terlarut dan vitamin C dilakukan menggunakan uji ANOVA dan DMRT (signifikansi $\alpha < 0,50$). Untuk hasil analisis mutu hedonik di uji menggunakan *Friedman*.

Hasil Penelitian: Persentase Kecambah Koro Pedang Putih: Air: Jahe: Serai berpengaruh nyata ($p = 0,025$) terhadap protein terlarut, warna, tekstur, aroma, dan rasa, tetapi tidak berpengaruh nyata terhadap vitamin C susu nabati ($p=0,500$). F3(1:16,67:6:7,5) merupakan formula terbaik berdasarkan perhitungan rumus indeks efektivitas.

Kesimpulan: Formula susu nabati terbaik mengandung kadar protein terlarut sebesar 14,1% dan vitamin C sebesar 54,2 mg/100g. Formula tersebut memiliki skor mutu rasa 3,3 (cukup khas susu nabati); mutu aroma 3,7 (cukup berbau rempah); utu warna 3,8 (putih kecoklatan); dan mutu tekstur 3,4 (cukup encer). Serving size susu nabati yaitu, 170 mL.

Kata Kunci: Kecambah Koro Pedang, Jahe Gajah, Serai, Diabetes Mellitus tipe 2, Susu nabati.

ABSTRACT

SOLUBLE PROTEIN, VITAMIN C, AND HEDONIC QUALITY OF JACK BEANS PROUTS, ZINGIBER OFFICINALE AND LEMONGRASS AS AN ALTERNATIVE BEVERAGE FOR TYPE 2 DIABETES MELLITUS

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Background: Plant-based milk made from sprouts jack bean with added zingiber officinale and lemongrass extract can serve as an alternative beverage for individuals with type 2 diabetes mellitus, as it contains protein and vitamin C. This study aims to determine the proportion sprouts of jack bean milk with the addition of zingiber officinale and lemongrass extract on the levels of soluble protein, vitamin C, and the hedonic qualities (taste, aroma, color, and texture) of the plant-based milk.

Methodology: This study used a non-factorial experimental randomized block design (RBD). The treatment factors of the proportion of Water: Sprouts: Ginger: Lemongrass were divided into 3 formulas F1 (1:10:10%:12.5%), F2 (1:8:8%:10%), and F3 (1:6:6%:7.5%) with 6 repetitions. Statistical analysis of soluble protein and vitamin C content were performed using ANOVA and DMRT (if significance $\alpha < 0.50$), while the sensory quality testing was done using Friedman.

Results: The proportion of White Sword Bean Sprout: Water: Ginger: Lemongrass significantly affected ($p = 0.025$) soluble protein, color, texture, aroma, and taste, but had no significant effect on the vitamin C content of the plant-based milk ($p = 0.500$). F3 (1:6:6%:7.5%) is the best formula based on the effectiveness index.

Conclusion: F3 contains 14.1% soluble protein and 54.2 mg/100g of vitamin C. This formula scored 3.3 for taste (fairly typical of plant-based milk), 3.7 for aroma (fairly spicy), 3.8 for color (brownish-white), and 3.4 for texture (fairly watery). One serving of plant-based milk is 170 mL.

Keyword: Jack Bean sprouts, Zingiber officinale, Lemongrass, Type 2 Diabetes Mellitus, Plant based milk Milk.