Abstrak

KANDUNGAN KALIUM DAN ANTIOKSIDAN FENOLIK YOGURT SUSU KECAMBAH KACANG MERAH YANG TERMODIFIKASI KADAR BAL DAN LAMA FERMENTASI UNTUK PENDERITA HIPERTENSI

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Latar Belakang: Konsumsi kalium yang memadai dan antioksidan fenolik diketahui dapat menghambat perkembangan hipertensi. Kecambah kacang merah memiliki kandungan kalium dan fenolik yang tinggi. Fermentasi BAL mampu meningkatkan kandungan kalium dan fenolik tersebut. Penelitian ini bertujuan untuk mengetahui pengaruh kadar BAL dan lama fermentasi terhadap kadar kalium dan total fenolik yogurt susu kecambah kacang merah.

Metodologi: Penelitian eksperimental ini menggunakan Rancangan Acak Kelompok (RAK). Faktor yang diuji terdiri dari 2 faktor yaitu kadar BAL (B) dan lama fermentasi (T). Terdapat 4 kombinasi perlakuan yang diulang sebanyak 5 kali sehingga diperoleh 20 unit percobaan. Variabel yang diamati dianalisis menggunakan analisis variansi (ANOVA) dengan α = 5% dan dilanjutkan dengan *Duncan's Multiple Range Test* (DMRT) 5%. Perlakuan terbaik dianalisis menggunakan Indeks Efektivitas.

Hasil Penelitian: Kadar kalium dan total fenolik tertinggi yogurt susu kecambah kacang merah yaitu 3161,1 mg/L dan 0,637 mg/mL. Tidak terdapat pengaruh nyata kadar BAL (B) terhadap kadar kalium dan total fenolik ($p>0,05$), dan lama fermentasi (T) terhadap kadar kalium. Terdapat pengaruh sangat nyata lama fermentasi (T) terhadap total fenolik ($p<0,05$).

Kesimpulan: Kadar kalium yogurt susu kecambah kacang merah berkisar antara 2667,6 – 3161,1 mg/L. Kadar BAL dan lama fermentasi terbaik terhadap peningkatan kadar fenolik yogurt susu kecambah kacang merah yakni kadar BAL 2% dan lama fementasi 24 jam.

Kata kunci: Yogurt, Kecambah Kacang Merah, Kalium, Fenolik, Hipertensi

Abstract

POTASSIUM AND PHENOLIC ANTIOXIDANTS CONTENT OF RED BEAN SPROUTS MILK YOGURT THAT ARE MODIFIED IN BAL LEVEL AND FERMENTATION DURATION FOR HYPERTENSION PATIENTS

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Background: Adequate consumption of potassium and phenolic antioxidants are known to inhibit the development of hypertension. Red bean sprouts have high potassium and phenolic content. BAL fermentation can increase the content of potassium and phenolic. This study aims to determine the effect of BAL levels and fermentation duration on potassium levels and total phenolic yogurt of red bean sprouts milk.

Methods: This experimental study uses a Randomized Group Design (RGD). Factors tested consist of 2 factors, namely BAL levels (B) and fermentation duration (T). There were 4 treatment combinations that were repeated 5 times to obtain 20 experimental units. The variables observed were analyzed using Analysis of Variance (ANOVA) with α = 5% and followed by Duncan's Range Multiple Range Test (DMRT) 5%. The best treatment was analyzed using the Effectiveness Index.

Result: The highest levels of potassium and phenolic red bean sprouts milk yogurt, which were 3161,1 mg/L and 0,637mg/mL.There was no significant effect of BAL (B) levels on potassium and total phenolic levels ($p>0,05$), and fermentation duration (T) on potassium levels. There is a very significant effect of fermentation duration (T) on total phenolic ($p <0,05$).

Conclusion: Potassium levels of red bean sprouts milk yogurt ranged from 2667,6 – 3161,1 mg/L. The best of BAL levels and fermentation duration to increase the levels of phenolic in red bean sprouts milk yogurt was 2% BAL and fementation duration 24 hours.

Keyword: Yogurt, Red Bean Sprouts, Potassium, Phenolic, Hypertension