

## TOTAL FENOL DAN TOTAL BAKTERI ASAM LAKTAT PADA YOGURT KACANG HIJAU DENGAN PENAMBAHAN JAHE EMPRIT DAN KAYU MANIS

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### ABSTRAK

**Latar Belakang :** Salah satu upaya penanganan dislipidemia ialah melalui pangan fungsional seperti yogurt probiotik. Modifikasi yogurt kacang hijau dengan penambahan jahe dan kayu manis dapat menjadi inovasi menarik yang mengandung senyawa fenolik dan bakteri asam laktat (BAL) yang bermanfaat bagi kesehatan.

**Tujuan :** Menganalisis perbedaan kandungan fenol dan total bakteri asam laktat pada yogurt kacang hijau dengan penambahan jahe emprit dan kayu manis.

**Metode :** Penelitian eksperimental ini memiliki 4 kelompok perlakuan formulasi F0 (kontrol), F1 (10% ekstrak), F2 (20% ekstrak) dan F3 (30% ekstrak). Kandungan total fenol dianalisis dengan menggunakan metode spektrofotometri dan total bakteri asam laktat dengan metode *total plate count* (TPC). Analisis univariat dilakukan uji normalitas dengan *Shapiro-Wilk*. Analisis bivariat dilakukan dengan menggunakan uji statistik *Mann Whitney* untuk melihat beda nyata antar formulasi.

**Hasil :** Semakin tinggi penambahan jahe emprit dan kayu manis dapat menurunkan kandungan fenol pada yogurt kacang hijau secara signifikan ( $p < 0,05$ ). F3 (30% ekstrak) mempunyai nilai terendah yaitu 0,330 mg GAE/g. Penambahan jahe dan kayu manis tidak mempengaruhi total BAL ( $p > 0,05$ ) dengan nilai yaitu  $1,133 \times 10^8$  CFU/ml hingga  $3,633 \times 10^8$  CFU/ml.

**Simpulan :** Formula yogurt kacang hijau dengan penambahan jahe emprit dan kayu manis menurunkan kandungan fenol secara signifikan tetapi tidak berpengaruh signifikan terhadap total bakteri asam laktat.

**Kata kunci :** yogurt, kacang hijau, jahe, kayu manis, fenol

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## TOTAL PHENOLIC CONTENT AND TOTAL LACTIC ACID BACTERIA IN MUNG BEAN YOGURT WITH THE ADDITION OF EMPRIT GINGER AND CINNAMON

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### ABSTRACT

**Background:** One of the efforts to treat dyslipideemia is through functional foods such as probiotic yogurt. Modifying mung bean yogurt with the addition of ginger and cinnamon can be an interesting innovation that contains phenolic compounds and lactic acid bacteria (BAL) that are beneficial for health.

**Objective:** Analyze the difference in phenolic content and total lactic acid bacteria in mung bean yogurt with the addition of emprit ginger and cinnamon.

**Methods:** This experimental study consisted of four treatment groups: formulation F0 (control), F1 (10% extract), F2 (20% extract), and F3 (30% extract). Total phenolic content was analyzed using a spectrophotometric method, while total lactic acid bacteria were determined using the total plate count (TPC) method. Univariate analysis was conducted using the Shapiro–Wilk normality test. Bivariate analysis was performed using the Mann–Whitney statistical test to determine significant differences among formulations.

**Results:** The higher addition of emprit ginger and cinnamon can significantly reduce the phenol content in mung been yogurt ( $p < 0.05$ ). F3 (30% extract) has the lowest value of 0,330 mg GAE/g. The addition of ginger and cinnamon dpes not affect the total LAB ( $p > 0.05$ ) with values of  $1.133 \times 10^8$  CFU/mL to  $3.633 \times 10^8$  CFU/mL.

**Conclusion:** The mung bean yogurt formulation with the addition of emprit ginger and cinnamon had a significant lowers the phenolic content but does not have a significant effect on total lactic acid bacteria.

**Keywords:** yogurt, mung bean, ginger, cinnamon, phenol

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