

**PENGARUH PEMBERIAN SEDUHAN FERMENTASI BIJI RAMBUTAN
(*Nephelium lappaceum* L.) DENGAN YOGHURT TERHADAP KADAR
HIGH DENSITY LIPOPROTEIN (HDL) PADA TIKUS WISTAR (*Rattus
norvegicus*)**

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Latar Belakang: Dislipidemia dengan kadar HDL yang rendah meningkatkan risiko penyakit kardiovaskular. Biji rambutan (*Nephelium lappaceum* L.) yang difermentasi dengan *yoghurt* mengandung senyawa bioaktif yang berpotensi meningkatkan kadar HDL.

Metodologi: Penelitian ini merupakan *true experimental* dengan rancangan *pre-post-test with control group* pada enam kelompok tikus Wistar jantan, terdiri dari kontrol sehat, kontrol negative, dan empat kelompok perlakuan dengan fermentasi biji rambutan selama 0, 3, 5 dan 7 hari. Tikus diinduksi HFD dan PTU selama 14 hari sebelum perlakuan. Kadar HDL diukur menggunakan spektrofotometer UV-Vis, dan uji fitokimia dilakukan untuk mengidentifikasi metabolit sekunder

Hasil Penelitian: Seluruh kelompok perlakuan mengalami peningkatan HDL dengan nilai terbesar pada fermentasi 7 hari (21,5 mg.dL), diikuti fermentasi 3 hari (17,5 mg/dL), 0 hari (14,5 mg/dL), dan 5 hari (11,6 mg/dL). Uji *Kruskal-Wallis* menunjukkan perbedaan bermakna antar kelompok ($p = 0,019$). Flavonoid, tanin-polifenol, dan alkaloid terdeteksi pada seluruh fermentasi.

Kesimpulan: Seduhan biji rambutan yang difermentasi dengan *yoghurt* efektif meningkatkan kadar HDL pada tikus Wistar yang diinduksi HFD dan PTU, dengan efektivitas tertinggi pada fermentasi 7 hari.

Kata kunci: Biji rambutan, Fermentasi, *Yoghurt*, HDL, Tikus Wistar

ABSTRACT

THE EFFECT OF FERMENTED RAMBUTAN SEED (*Nephelium lappaceum* L.) INFUSION WITH YOGURT ON HIGH DENSITY LIPOPROTEIN LEVELS IN WISTAR RATS (*Rattus norvegicus*)

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Background: Dyslipidemia with low levels of HDL increases the risk of cardiovascular disease. Rambutan seed (*Nephelium lappaceum* L.) which fermented with yoghurt contain bioactive compounds that potentially increase HDL levels.

Method: This study was true experimental research with a pre-pro test towards control group involving six groups of male Wistar rats, consisting of a healthy control, a negative control, and four treatment groups with rambutan seed fermentation for 0, 3, and 7 days. The rats were induced with HFD and PTU for 14 days prior to treatment. HDL levels were measured using a UV-Vis spectrophotometer, and phytochemical tests were conducted to identify secondary metabolites.

Result: All of the treatment groups experienced an increase in HDL, with the highest value observed in the 7-day fermentation (21.5 mg.Dl), followed by the 3-day fermentation groups (17.5 mg.dl), and 5-day (11.6 mg/dL). The Kruskal-Wallis test showed significant differences between groups ($p = 0.019$). Flavonoid, tannin-polyphenols, and alkaloids were detected in all fermentation.

Conclusion: The fermented rambutan seed extract with yogurt effectively increased HDL levels in Wistar rats which induced with HFD and PTU, with the highest effectiveness observed in 7-day fermentation.

Keywords: Fermentation, HDL, Rambutan seed, Wistar Rats, Yoghurt,

