

Aktivitas Antijamur Derivat Asam Risinoleat dengan Glisina dan Fenilalanina terhadap *Candida albicans* = Antifungal Activity of Ricinoleic Acid Derivatives with Glycine and Phenylalanine Against *Candida albicans*

Rina Anggraeni, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20520409&lokasi=lokal>

Abstrak

Asam risinoleat sebagai komponen utama minyak jarak diketahui memiliki efek anti-inflamasi yang berpotensi menjadi kandidat antijamur. Pada penelitian ini, asam risinoleat dimodifikasi dengan menggunakan glisina dan fenilalanina membentuk lipoamida melalui reaksi esterifikasi dan amidasi. Reaksi esterifikasi dilakukan dengan mencampurkan asam risinoleat, dry metanol, dan HCl pekat untuk membentuk metil risinoleat. Kemudian, metil risinoleat diamidasi dengan glisina dan fenilalanina. Berdasarkan hasil karakterisasi lipoamida menggunakan FT-IR, didapatkan puncak serapan C-N (stretch) dan N-H (bend) yang muncul pada spektrum yang menandakan keberhasilan produk sintesis. Terhadap produk lipoamida yang terbentuk dilakukan pengujian aktivitas antijamur untuk mengetahui aktivitas penghambatan pertumbuhan terhadap *Candida albicans*. Berdasarkan hasil pengujian, didapatkan bahwa lipoamida risinoleat-glisina dan lipoamida risinoleat-fenilalanina memiliki aktivitas antijamur terhadap *Candida albicans* dengan besarnya zona hambat masing-masing yaitu 9 mm (lemah) dan 8 mm (lemah).

.....Ricinoleic acid as the main component of castor oil is known to have an anti-inflammatory effect that has the potential to be an antifungal candidate. In this study, ricinoleic acid was modified using glycine and phenylalanine to form lipoamides through esterification and amidation reactions. The esterification reaction was carried out by mixing ricinoleic acid, dry methanol, and concentrated HCl to form methyl ricinoleate. Then, methyl ricinoleate was amidated with glycine and phenylalanine. Based on the results of lipoamide characterization using FT-IR, C-N (stretch) and N-H (bend) absorption peaks appeared on the spectrum indicating the success of the synthesis product. The lipoamide product was tested for antifungal activity to determine the growth inhibitory activity against *Candida albicans*. Based on the test, it was found that ricinoleic-glycine lipoamide and ricinoleic-phenylalanine lipoamide had antifungal activity against *Candida albicans* with the inhibition zones of 9 mm (weak) and 8 mm (weak).