Aktivitas Antijamur Senyawa Lipoamida Asam Risinoleat Teroksidasi-Glisina dan Fenilalanina terhadap Candida albicans = Antifungal Activity of Lipoamide of Oxidized Ricinoleic Acids-Glycine and Phenylalanine against Candida albicans

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Abstrak

Penelitian untuk menemukan obat antijamur baru masih terus dilakukan. Asam lemak, khususnya asam risinoleat, menjadi senyawa yang menarik minat para peneliti dalam bidang ini. Pada penelitian ini dilakukan sintesis amida ester asam risinoleat teroksidasi-glisina dan amida ester asam risinoleat teroksidasi-fenilalanina melalui tiga tahapan reaksi yang meliputi reaksi esterifikasi Fischer, reaksi oksidasi pada ikatan rangkap, dan reaksi amidasi. Produk dari setiap tahap dikarakterisasi dengan KLT dan FT-IR. Hasil karakterisasi senyawa lipoamida dengan KLT menunjukkan penurunan spot yang mengindikasikan adanya senyawa lipoamida dalam produk hasil amidasi. Hasil karakterisasi produk amidasi dengan FT-IR menunjukkan senyawa amida terbentuk karena adanya gugus fungsi yang khas pada senyawa amida, yaitu gugus C=O amida, pada bilangan gelombang 1731 cm-1 untuk lipoamida-glisina dan 1733 cm-1 untuk lipoamida-fenilalanina. Hasil uji aktivitas antijamur produk amidasi menunjukkan lipoamida-glisina dan lipoamida-fenilalanina tidak mempunyai aktivitas antijamur terhadap Candida albicans.
.....Research to find new antifungal drugs is still ongoing. Ricinoleic acid in particular is a fatty acid that has drawn the attention of researchers in this area. In this research, the synthesis of glycine-oxidized ricinoleic acid amide ester and phenylalanine-oxidized ricinoleic acid ester amide was carried out through three reaction steps, which included Fischer esterification reaction, oxidation reaction of the double bond, and amidation reaction. The products of each stage were characterized by TLC and FT-IR. The results of the characterization of lipoamide compounds by TLC showed a decrease in the spot’s travel length, which indicated the presence of lipoamide compounds in the amidation product. The results of the characterization of the amidation product with FT-IR showed that the amide compound was formed due to the presence of a unique functional group on the amide compound, namely the C=O amide group, at wave numbers 1731 cm-1 for lipoamide-glycine and 1733 cm-1 for lipoamide-phenylalanine. The antifungal activity test results of amidation products showed that lipoamide-glycine and lipoamide-phenylalanine do not have antifungal activity against Candida albicans.