

SKRIPSI SARJANA FARMASI

**UJI AKTIVITAS EKSTRAK ETANOL RIMPANG GANDASULI
(*Hedychium coronarium* J. Koenig) SEBAGAI INHIBITOR ENZIM
TIROSINASE**



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ABSTRAK

Uji Aktivitas Ekstrak Etanol Rimpang Gandasuli (*Hedychium Coronarium* J. Koenig) Sebagai Inhibitor Enzim Tirosinase

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Gandasuli (*Hedychium coronarium* J. Koenig) merupakan tanaman dari family *Zingiberaceae*. Tanaman ini biasanya digunakan sebagai obat tradisional seperti obat demam, pereda nyeri, dan gangguan pencernaan. Salah satu bagian tanaman gandasuli yang dimanfaatkan adalah rimpang. Rimpang gandasuli diketahui memiliki kandungan kimia flavonoid yang berpotensi sebagai inhibitor enzim tirosinase. Penelitian ini bertujuan untuk mengkarakterisasi ekstrak rimpang gandasuli dan uji inhibitor enzim tirosinase. Uji inhibitor enzim tirosinase menggunakan metoda *in vitro* dengan pengukuran senyawa dopakrom. Parameter yang diamati pada uji inhibitor enzim tirosinase adalah nilai IC_{50} dari ekstrak rimpang gandasuli dan asam kojat sebagai kontrol positif. Dari hasil penelitian, parameter organoleptis ekstrak rimpang gandasuli memiliki karakter ekstrak kental, warna coklat kehitaman, bau khas aromatis, dan rasa pahit. Rendemen ekstrak 0,8795%, kadar abu total $12,60\% \pm 0,27\%$, kadar abu tidak larut asam $0,23\% \pm 0,02\%$, dan kadar air 5,96%. Ekstrak mengandung senyawa alkaloid, fenolik, flavonoid, dan terpenoid. Hasil uji inhibitor enzim tirosinase ekstrak rimpang gandasuli memiliki potensi kurang kuat dengan nilai IC_{50} sebesar 183,85 ppm dan asam kojat memiliki potensi sangat kuat dengan nilai IC_{50} sebesar 17,09 ppm.

Kata kunci: *Hedychium coronarium* J. Koenig, ekstrak, karakterisasi, inhibitor, tirosinase

ABSTRACT

The Ethanol Extract Activity Test of White Garland Lily (*Hedychium coronarium* J. Koenig) Rhizome as an Inhibitor of Tyrosinase Enzyme

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White Garland Lily (*Hedychium coronarium* J. Koenig) is the family of *Zingiberaceae*. This plant is usually used as a traditional medicine for fever, analgesic (pain killer), and indigestion. One of its commonly utilized parts is the rhizome. It is known to have chemical content of flavonoid that is potential as tyrosinase enzyme inhibitor. The parameter observed in the tyrosinase enzyme inhibitor test was the IC₅₀ value of white garland lily rhizome extract and kojic acid as a positive control. This study aims to characterize the white garland lily rhizome extract and test the tyrosinase enzyme inhibitor. To conduct the test, the researcher applies the in vitro method by measuring dopachrome compounds. The result of the study shows that the organoleptic parameter of the rhizome extract has the characteristics which are dense, blackish brown, aromatic, and bitter. Extract yield is 0.8795%, the total of ash content is 12.60% ± 0.27%, acid insoluble ash content is 0.23% ± 0.02%, and water content is 5.96%. The extract contains alkaloid, phenolic, flavonoid, and terpenoid compounds. The result of the tyrosinase enzyme inhibitor test shows that the white garland lily rhizome extract has less strong potential with an IC₅₀ value of 183.85 ppm and the kojic acid has very strong potential with an IC₅₀ value of 17,09 ppm.

Key Words: *Hedychium coronarium* J. Koenig, Characteristic, Extract, Inhibitor, Tyrosinase