Pengembangan Potensi Antibakteri Kelopak Bunga Hibiscus sabdariffa L. (Rosela) Terhadap Streptococcus sanguinis Penginduksi Gingivitis Menuju Obat Herbal Terstandar = The Antibacterial Potency Development of Hibiscus sabdariffa L. calyx (Rosela) to Streptococcus sanguinis as Gingivitis Inducer Toward Scientific Based Herbal Medicine

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Abstrak

Disertasi ini merupakan hasil penelitian eksperimental laboratorik yang mencakup: uji fitokimia ekstrak etanol H. sabdariffa L. yang bersifat antibakteri, uji penetapan parameter standar, uji KHM, KBM, zona hambat, uji toksisitas akut dan subkronis, uji sitotoksisitas terhadap sel epitel dan fibroblast serta uji efektivitas ekstrak H. sabdariffa L. terhadap S. sanguinis. Penelitian ini merupakan penelitian analitik kuantitatif. Hasil penelitian ini menunjukkan bahwa ekstrak etanol H. sabdariffa L. mengandung golongan senyawa antibakteri fenol, flavonoid, tanin dan saponin. Parameter standar dapat ditetapkan.

Hasil KHM dan KBM 0,78%, dan zona hambat H. sabdariffa L. setara dengan klorheksidin. Ekstrak ini aman dan tidak toksik terhadap organ vital tikus pada uji toksisitas akut dan subkronis. Hasil MTT assay menunjukkan ekstrak tidak toksik terhadap sel epitel dan fibroblast. Hasil uji biofilm menunjukkan ekstrak H. sabdariffa L. dapat menurunkan potensi pertumbuhan S. sanguinis pada biofilm.
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This dissertation is the result of laboratory experimental study involving phytochemistry test from ethanol extract of H. sabdariffa L. and to detect the standard parameters, MIC, MBC test, and inhibition zone, the acute and subchronic toxicity tests and the epithelial and fibroblast cytotoxicity tests. The effectiveness of the H.sabdariffa L. extracts in suppression of the S. sanguinis were also measured. This was a quantitative with analytical design study. The result of this study showed that in the ethanol extract H. sabdariffa L. contained phenol, flavonoid, tannin and saponin compounds. These compounds are well known antibacterial compounds.

The sensitivity tests showed that the MIC and MBC of H. sabdariffa L. was 0,78%, while the inhibition zone of H. sabdariffa L. was equivalent to chlorhexidine. The acute and subchronic toxicity tests showed that this compound was non-toxic. The MTT assay tests showed that the compound were not toxic to epithelial cell and fibroblast. The biofilm test showed that the extract of H. sabdariffa L.was a potent suppresor of S. sanguinis.