

INTISARI

Luka bakar derajat II memiliki prevalensi tertinggi dan sering terjadi di lingkungan rumah tangga. Proses penyembuhannya dipercepat dengan obat tradisional. Salah satu tanaman yang dikenal memiliki kemampuan penyembuhan luka adalah tanaman binahong (*Anredera Cordifolia* (Ten.) Steenis). Sediaan gel dipilih berkaitan dengan banyaknya keuntungan yang didapatkan. *Gelling agent* yang digunakan yaitu *Hydroxypropyl Methyl Celullose* dan *Hydroxyethyl Celullose*. Kombinasi *gelling agent* ini dipilih karena keduanya mampu menghasilkan sediaan gel dengan stabilitas yang baik selama penyimpanan. Oleh karena itu, dilakukan optimasi untuk mendapatkan formula optimum yang memenuhi persyaratan. Respon yang diamati adalah organoleptis, pH, daya sebar, daya lekat, viskositas, dan homogenitas. Data yang diperoleh dioptimasi dengan program *Simplex Lattice Design* dalam *software Design Expert* versi 13.0.0. Hasil pengujian verifikasi dibandingkan signifikansinya dengan uji T-test dengan taraf kepercayaan 95%. Stabilitas gel optimum daun binahong (*Anredera Cordifolia* (Ten.) Steenis) diuji dengan menggunakan *one-way ANOVA* dan *post hoc*.

Hasil penelitian menunjukkan formula optimum gel ekstrak daun binahong (*Anredera Cordifolia* (Ten.) Steenis) didapat dengan perbandingan komposisi HPMC 0,5% dan HEC 4,5%. Berdasarkan hasil verifikasi diperoleh nilai prediski SLD yang valid untuk respon pH, viskositas dan daya sebar sesuai prediksi. Formula optimum gel ekstrak daun binahong (*Anredera Cordifolia* (Ten.) Steenis) stabil selama pengujian *cycling test*.

Kata Kunci: daun binahong, penyembuh luka, gel.

ABSTRACT

Second degree burns have the highest prevalence and often occur in the household environment. Healing process is accelerated by traditional medicine. One of plants known to have wound healing abilities is binahong plant (*Anredera Cordifolia* (Ten.) Steenis). The gel preparation is chosen due to the many benefits it can provide. Gelling agents that used are Hydroxypropyl Methyl Cellulose and Hydroxyethyl Cellulose. This combination of gelling agents was chosen because both of them are capable of producing gel preparations with good stability during storage. Therefore, optimization is carried out to obtain the optimum formula that meets the requirements. Observed responses were organoleptic, pH, spreadability, adhesion, viscosity, and homogeneity. Data obtained was optimized with the Simplex Lattice Design program in Design Expert software version 13.0.0. The results of the verification test were compared for significance with the T-test with a 95% confidence level. Optimum gel stability of binahong leaves (*Anredera Cordifolia* (Ten.) Steenis) was tested using one-way ANOVA and post hoc.

The results showed that the optimum formula for binahong leaf extract gel (*Anredera Cordifolia* (Ten.) Steenis) was obtained with a composition ratio of 0.5% HPMC and 4.5% HEC. Based on the results of the verification, it was obtained that the SLD prediction values were valid for the response of pH, viscosity and spreadability as predicted. The optimum formula for binahong leaf extract gel (*Anredera Cordifolia* (Ten.) Steenis) is stable during the cycling test.

Keywords: binahong leaves, wound healing, gel.