

INTISARI

Tetrahydroheksagamavunon-5 (THHGV-5) merupakan senyawa analog Tetrahydrokurkumin yang memiliki aktifitas antioksidan relatif besar dengan nilai IC_{50} sebesar 68,95 μ M. THHGV-5 diformulasikan dalam bentuk sediaan *lotion* dengan mengkombinasikan parafin cair sebagai emolien dan gliserin sebagai humektan sehingga didapatkan *lotion* dengan sifat fisik yang optimum dan stabil serta tetap memiliki aktivitas antioksidan.

Sediaan *lotion* dibuat dalam 8 *run* dan ditentukan formula optimum *lotion* dengan metode *Simplex Lattice Design* (SLD). Respon yang digunakan untuk menentukan formula optimum adalah pH, viskositas, daya sebar dan daya lekat. Evaluasi sifat fisik *lotion* meliputi uji organoleptis, pH, viskositas, daya sebar, daya lekat dan tipe emulsi serta uji stabilitas fisik dipercepat. Data yang dihasilkan, dianalisis secara statistik.

Hasil penelitian menunjukkan bahwa formula optimum sediaan *lotion* THHGV-5 dengan kadar parafin cair sebesar 7,57 % $^{b/b}$ dan kadar gliserin sebesar 23,43 % $^{b/b}$ memiliki nilai pH sebesar 6,608, viskositas sebesar 39,09 dPa.s, daya sebar sebesar 27,46 cm^2 , dan daya lekat sebesar 10,03 detik. Formula optimum *lotion* stabil secara organoleptis, pH, viskositas, daya sebar, daya lekat dan tipe emulsi selama 3 siklus (6 hari) dalam uji *freeze and thaw cycling*. Formula optimum *lotion* memiliki aktivitas antioksidan dengan nilai IC_{50} sebesar 107,30 mg/mL.

Kata kunci : Tetrahydroheksagamavunon-5, *lotion*, parafin cair, gliserin.

ABSTRACT

Tetrahydrohexagamavunon-5 (THHGV-5) is a Tetrahydrocurcumin analog which has antioxidant activity. THHGV-5 has IC_{50} value at concentration $68.95 \mu M$ by using DPPH radical scavenging activity method. THHGV-5 lotion was formulated in combination of liquid paraffin as an emollient and glycerin as a humectant in order to obtain a lotion formula with optimum physical properties, stability and has antioxidant activity.

Lotions were made in eight runs and the optimum formula of lotion was determined by using Simplex Lattice Design (SLD) method. Respons that used to determine the optimum formula are pH, viscosity, spreadability and adhesiveness. Evaluation of physical properties of lotions include organoleptic test, pH, viscosity, spreadability, adhesiveness, emulsion type and also accelerated physical stability test. Then, the result were analyzed statistically.

The results showed that the optimum formula of lotion of THHGV-5 was achieved at 7.57% w/w of liquid paraffin and 23.43% w/w of glycerin. The optimum formula has pH value 6.608, viscosity 39.09 dPa.s, spreadability 27.46 cm^2 , and adhesiveness 10.03 seconds. Test of freeze and thaw for 3 cycles (6 days) indicated a stable value of organoleptic, pH, viscosity, spreadability, adhesiveness and emulsion type. The lotion with optimum formula has antioxidant activity with IC_{50} value at 107.30 mg/mL of concentration.

Keywords : Tetrahydrohexagamavunon-5, lotions, liquid paraffin, glycerin.