

INTISARI

PRADEWI, R.T., 2015, PENGARUH PENGGUNAAN ASAM STEARAT DAN TRIETANOLAMIN TERHADAP SIFAT FISIK SEDIAAN *LOTION SUNSCREEN* EKSTRAK ETANOL RIMPANG TEMU MANGGA (*Curcuma mangga* Val.), SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Temu mangga mengandung senyawa kurkuminoid yang dapat diaplikasikan sebagai tabir surya untuk mencegah radiasi sinar ultraviolet. Temu mangga diformulasikan dalam sediaan *lotion* agar mudah digunakan. Penelitian ini bertujuan untuk mengetahui pengaruh variasi konsentrasi asam stearat dan trietanolamin (TEA) terhadap sifat fisik dan nilai *sun protecting factor* (SPF) sediaan *lotion*.

Ekstrak etanol diperoleh dengan metode maserasi menggunakan pelarut etanol 96%. Pengukuran nilai SPF secara *in vitro* menggunakan spektrofotometer ultraviolet-visibel. SPF dihitung dan diplotkan dengan konsentrasi menggunakan metode regresi non linier. Formulasi ekstrak temu mangga dalam sediaan *lotion* menggunakan variasi konsentrasi asam stearat dan TEA dibuat dengan perbandingan F1 (5%:1%), F2 (7%:1%), F3 (5%:2%), dan F4 (7%:2%). Uji stabilitas sifat fisik sediaan *lotion* meliputi pemeriksaan organoleptik, homogenitas, viskositas, daya sebar, tipe *lotion* dan pH. Hasil diuji secara statistik menggunakan anova dua jalan dengan taraf kepercayaan 95%.

Hasil penelitian menunjukkan bahwa ekstrak temu mangga sebesar 0,066% dapat memberikan nilai SPF 30. Asam stearat dan TEA memberikan pengaruh terhadap sifat fisik sediaan *lotion*. Perbandingan variasi konsentrasi asam stearat dan TEA sebagai emulgator sebesar 5%:2% dapat menghasilkan sediaan *lotion* yang paling stabil.

Kata kunci: Temu mangga, SPF, asam stearat, TEA, *lotion* tabir surya

ABSTRACT

PRADEWI, R.T., 2015. THE INFLUENCE OF STEARIC ACID AND TRIETHANOLAMINE ON PHYSICAL PROPERTIES OF SUNSCREEN LOTION OF *Curcuma mangga* RHIZOME ETHANOL EXTRACT. UNDERGRADUATE THESIS. FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Curcuma mangga consists of curcuminoids compound that can be applied as sun filter to prevent ultraviolet radiation. *Curcuma mangga* has been prepared in lotion dosage form due to its easy to use. The aims of this research was to determine varying concentrations of stearic acid and triethanolamine (TEA) on physical properties and sun protecting factor (SPF) value of sunscreen lotion.

Ethanol extract was obtained by maceration method using ethanol 96% as solvent. *In vitro* measurement of SPF used spectrophotometer Ultraviolet-visible. The SPF was calculated and plotted with concentrations using non-linear regression method. Formulation *Curcuma mangga* in sunscreen lotion using varying concentrations of stearic acid and TEA was prepared by several ratios *i.e.* F1 (5%:1%), F2 (7%:1%), F3 (5%:2%), and F4 (7%:2%). Physical stability and properties of lotion were conducted *i.e.* organoleptic, homogeneity, viscosity, spreadibility, emulsion type and pH. The results were statistically analyzed using two way analysis of variance at confidence level of 95%.

The results showed that *Curcuma mangga* extract as many as 0,066% provided SPF value of 30. The stearic acid and TEA affected on physical properties of sunscreen lotion. Stearic acid of 5% and TEA of 2% provided the most stable formulation of sunscreen lotion.

Keywords: *Curcuma mangga*, SPF, stearic acid, TEA, sunscreen lotion