

ABSTRAK

NAIMATUL NUR ANISA., 2022, PENGARUH PROPORSI ASAM STEARAT DAN TEA TERHADAP MUTU FISIK SEDIAAN *LOTION* ANTIOKSIDAN EKSTRAK ETANOL KULIT BUAH MANGGIS (*Garcinia mangostana* L.), SKRIPSI, PROGRAM STUDI S1 FARMASI FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI SURAKARTA. Dibimbing oleh apt. Reslely Harjanti, S.Farm., M.Sc dan apt. Anita Nilawati, M.Farm.

Radiasi sinar ultraviolet yang berlebihan mampu memberikan dampak negatif pada kulit. Pencegahan dilakukan dengan menghindari sinar matahari berlebihan dan mengkonsumsi antioksidan. Kulit manggis (*Garcinia mangostana* L.) mengandung senyawa *xanthone* yang memiliki aktivitas sebagai penangkal radikal bebas. Tujuan penelitian ini adalah memformulasikan sediaan *lotion* ekstrak kulit manggis dengan proporsi asam stearat dan TEA .

Ekstrak kulit manggis diformulasikan menjadi sediaan *lotion* dengan variasi proporsi asam stearat dan TEA (3% : 1%), (4% : 1,5%), (4% : 2%). Asam stearat dan trietanolamin digunakan bahan pengemulsi yang stabil. Sediaan *lotion* diuji mutu fisik (organoleptis, homogenitas, pH, viskositas, daya sebar, daya lekat, dan uji tipe emulsi) dan uji stabilitas sediaan dengan metode *cycling test*. Sediaan *lotion* diuji aktivitas antioksidan dengan metode DPPH. Hasil penelitian dianalisis dengan IBM SPSS statistics 21 *One Way ANOVA* dan *Post Hoc*.

Hasil penelitian menunjukkan bahwa asam stearat dan TEA berpengaruh terhadap pH, viskositas, daya lekat, daya sebar. Formula 1 dengan konsentrasi asam stearat 3% dan TEA 1% merupakan sediaan terbaik yang menghasilkan *lotion* dengan bentuk semi padat, berwarna coklat, beraroma *rossae*, nilai pH 6,6. Viskositas 3,183 cPas, daya sebar 5,57-6,26 cm, daya lekat 1,31 detik, dan untuk IC₅₀ 101,008 ppm.

Kata kunci: Antioksidan, DPPH, ekstrak kulit buah manggis, *lotion*, Asam stearat, TEA.

ABSTRACT

NAIMATUL NUR ANISA, 2022, THE EFFECT OF PROPORTION OF STEARIC ACID AND TEA ON THE PHYSICAL QUALITY OF ANTIOXIDANT LOTION PREPARATION ETHANOL EXTRACT OF MANGOSMENT FRUIT (*Garcinia mangostana* L.), THESIS, STUDY PROGRAM OF PHARMACY, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA. Supervised by apt. Reslely Harjanti, S.Farm., M.Sc and apt. Anita Nilawati, M.Farm.

Excessive ultraviolet radiation has an impact on the skin. Prevention is done by avoiding excessive sunlight and consuming antioxidants. Mangosteen peel (*Garcinia mangostana* L.) contains xanthone compounds which have activity as free radical scavengers. The aim of this study was to formulate a mangosteen rind extract lotion with the proportions of stearic acid and TEA.

Mangosteen peel (*Garcinia mangostana* L.) extract was formulated into a lotion preparation with the proportions of stearic acid and TEA (3% : 1%), (4% : 1,5%), (4% : 2%). Stearic acid and triethanolamine are used as stable emulsifying agents. The lotion preparations were tested for physical quality (organoleptic, homogeneity, pH, viscosity, spreadability, adhesion, and emulsion type test) and the stability test was carried out using the cycling test method. Lotion was tested for antioxidant activity with the DPPH method. The research results were analyzed using IBM SPSS statistics 21 One Way ANOVA and Post Hoc.

The result showed that stearic acid and TEA had an effect on lotion preparations. Formula 1 with a concentration of stearic acid and TEA (3% : 1%) is the best preparation which produces a lotion in a semi-solid form, brown color, has a rose scent, a pH value of 6,6, viscosity 3,183 cPas., spreadability 5,57-6,26 cm, adhesion 1,31 seconds, and for IC₅₀ 101,008 ppm.

Keywords: Antioxidant, DPPH, mangosteen rind extract, lotion, stearic acid, TEA.