

INTISARI

EZZY AL BAZZY ABDUL HASAN HAMID, 2022, UJI AKTIVITAS ANTIOKSIDAN SEDIAAN *LOTION* FRAKSI N-HEKSAN, ETIL ASETAT DAN AIR DARI EKSTRAK DAUN SIRSAK (*Annona Muricata L.*) DENGAN METODE DPPH, SKRIPSI, PROGRAM STUDI S1 FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA, Dibimbing oleh Dr. Mardiyono, M.Si dan apt. Anita Nilawati, M.Farm.

Sediaan *lotion* berfungsi untuk melindungi kulit tubuh manusia dari lingkungan seperti cuaca dan iklim. Daun sirsak (*annona muricata L.*) merupakan tanaman yang mengandung senyawa antioksidan yang dapat dimanfaatkan untuk melindungi kulit dari kerusakan yang disebabkan oleh radikal bebas. Penelitian ini dilakukan untuk mengetahui kandungan aktivitas antioksidan fraksi daun sirsak setelah dibuat dalam sediaan *lotion*.

Pembuatan ekstrak dengan metode maserasi menggunakan pelarut etanol 70%, selanjutnya dilakukan fraksinasi menggunakan pelarut n-heksan, etil asetat dan air dengan metode ekstraksi cair-cair. Fraksi yang diperoleh kemudian diformulasikan menjadi sediaan *lotion* yang terbagi menjadi F1 sebagai basis tanpa mengandung zat aktif, F2 mengandung fraksi n-heksan, F3 mengandung fraksi etil asetat dan F4 mengandung fraksi air. Konsentrasi zat aktif sediaan *lotion* masing-masing sebanyak 2,8%. Seluruh *lotion* diuji mutu fisik mencakup uji organoleptis, homogenitas, pH, viskositas, daya sebar dan stabilitas. Fraksi dan sediaan *lotion* kemudian diuji aktivitas antioksidan menggunakan metode DPPH.

Hasil penelitian menunjukkan bahwa fraksi n-heksan, etil asetat dan air daun sirsak memiliki pengaruh terhadap mutu fisik dan aktivitas antioksidan sediaan *lotion*. F1 dan F3 merupakan sediaan yang stabil terhadap mutu fisik sediaan *lotion*. F3 merupakan sediaan terbaik menghasilkan sediaan berbentuk semi padat, berwarna coklat, aroma jeruk, nilai pH 5,12; viskositas 176,67 dPas, daya sebar 6,67-6,87 cm. F2 dan F4 tidak stabil terhadap mutu fisik homogenitas karena terjadi pemisahan fase yang disebabkan oleh sifat zat aktif yaitu non polar dan polar. Aktivitas antioksidan dilakukan terhadap kontrol positif kuersetin, fraksi n-heksan, fraksi etil asetat, fraksi air dan sediaan *lotion*. Hasil pengujian aktivitas antioksidan diperoleh nilai IC₅₀ terhadap kuersetin sebesar 31,586 ppm, fraksi n-heksan 118,112 ppm, fraksi etil asetat 57,428 ppm, fraksi air 66,123 ppm, F1 336,512 ppm, F2 182,323 ppm, F3 129, 232 ppm, dan F4 144,377 ppm. Penelitian terhadap uji aktivitas antioksidan fraksi n-heksan, etil asetat dan air daun sirsak setelah dibuat dalam bentuk sediaan *lotion* aktivitas antioksidannya menurun.

Kata kunci : *Lotion*, antioksidan, fraksi daun sirsak

ABSTRACT

EZZY AL BAZZY ABDUL HASAN HAMID, 2022, TESTING ANTIOXIDANT ACTIVITY OF LOTION PREPARATION OF N-HEXAN, ETIL ACETATE AND WATER FROM THE EXTRACT OF SOURSOP LEAF (*Annona Muricata* L.) USING DPPH METHOD, THESIS, BACHELOR OF PHARMACY, *Supervised by Dr. Mardiyono, M.Si dan apt. Anita Nilawati, M.Farm.*

The lotion preparation serves to protect the skin of the human body from the environment such as weather and climate. Soursop leaf (*Annona muricata* L.) is a plant that contains antioxidant compounds that can be used to protect the skin from damage caused by free radicals. This research was conducted to determine the antioxidant activity content of the soursop leaf fraction after being made into lotion preparations.

The research was conducted by maceration extraction method using 70% ethanol solvent, then fractionation using n-hexane, ethyl acetate and water as solvent with liquid-liquid extraction method was carried out. The obtained fraction was then formulated into a lotion preparation which was divided into F1 as a base without containing the active substance, F2 containing the n-hexane fraction, F3 containing the ethyl acetate fraction and F4 containing the water fraction. The concentration of the active substance in the lotion preparation was 2.8% each. The lotion preparations were tested for physical quality including organoleptic, homogeneity, pH, viscosity, dispersibility and stability tests. The fraction and lotion preparation were then tested for antioxidant activity using the DPPH method.

The results showed that the fraction of n-hexane, ethyl acetate and soursop leaf water had an effect on the physical quality and antioxidant activity of lotion preparations. F1 and F3 are preparations that are stable to the physical quality of lotion preparations. F3 is the best preparation to produce semi-solid preparations, brown in color, citrus aroma, pH value 5.12; viscosity 176.67 dPas, spreading power 6.67-6.87 cm. F2 and F4 are not stable to the physical quality of homogeneity because there is a phase separation caused by the nature of the active substance, namely non-polar and polar. Antioxidant activity was carried out on positive controls of quercetin, n-hexane fraction, ethyl acetate fraction, water fraction and lotion preparations. The results of the antioxidant activity test showed that the IC_{50} value of quercetin was 31.586 ppm, the n-hexane fraction was 118.112 ppm, the ethyl acetate fraction was 57.428 ppm, the water fraction was 66.123 ppm, F1 336.512 ppm, F2 182.323 ppm, F3 129, 232 ppm, and F4 144.377 ppm. Research on the antioxidant activity test of the fractions of n-hexane, ethyl acetate and soursop leaf water after being made in the form of a lotion, the antioxidant activity decreased.

Keywords: Lotion, antioxidant, soursop leaf fraction