

FORMULASI SEDIAAN MASKER EKSTRAK DAUN KACAPIRING (*Gardenia jasminoides* J.Ellis)

ABSTRAK

Kulit merupakan organ pelindung tubuh yang rentan mengalami kerusakan, yang dapat disebabkan oleh paparan radikal bebas dan sinar ultraviolet (UV). Salah satu upaya untuk mencegah kerusakan kulit adalah penggunaan antioksidan alami dalam sediaan kosmetik. Daun kacapiring (*Gardenia jasminoides* J. Ellis) diketahui mengandung senyawa flavonoid, alkaloid, saponin, tanin, dan steroid yang berpotensi sebagai antioksidan. Penelitian ini bertujuan untuk mengetahui nilai IC_{50} ekstrak etanol daun kacapiring serta memformulasi sediaan masker yang memenuhi persyaratan farmasetika. Penelitian meliputi pembuatan ekstrak dengan metode maserasi menggunakan etanol 70%, karakteristik ekstrak, uji aktivitas antioksidan dengan metode DPPH, formulasi masker dengan variasi konsentrasi ekstrak 0%, 4%, 6%, dan 8%, serta evaluasi sediaan yang meliputi organoleptik, tapped density, kadar air, pH, homogenitas, daya lekat, waktu Pengeringan, daya sebar, viskositas, dan stabilitas. Hasil penelitian menunjukkan bahwa ekstrak etanol daun kacapiring menghasilkan rendemen sebesar 36% dengan kadar air 8,24% dan kadar abu 1,81%. Skrining fitokimia menunjukkan adanya kandungan alkaloid, flavonoid, saponin, tanin, dan steroid. Hasil uji aktivitas antioksidan ekstrak menunjukkan nilai IC_{50} sebesar 33,194 ppm yang termasuk kategori sangat kuat. Evaluasi fisik sediaan masker menunjukkan seluruh formula memiliki tekstur halus, homogen, pH sesuai rentang pH kulit (4,5–6,5), daya lekat 9,33–11 detik, serta waktu pengeringan 24,67–29,67 menit. Uji stabilitas menunjukkan sediaan tetap stabil selama penyimpanan. Berdasarkan hasil tersebut, dapat disimpulkan bahwa ekstrak etanol daun kacapiring berpotensi dikembangkan sebagai bahan aktif dalam sediaan masker antioksidan yang aman dan memiliki mutu fisik yang baik.

Kata kunci: daun kacapiring, antioksidan, masker, DPPH, *Gardenia jasminoides* J. Ellis

FORMULATION OF A MASK PREPARATION CONTAINING KACAPIRING LEAF EXTRACT (*Gardenia jasminoides* J.Ellis)

ABSTRACT

The skin is the body's protective organ and is susceptible to damage, which can be caused by exposure to free radicals and ultraviolet (UV) rays. One way to prevent skin damage is through the use of natural antioxidants in cosmetic formulations. Kacapiring leaves (*Gardenia jasminoides* J. Ellis) are known to contain flavonoids, alkaloids, saponins, tannins, and steroids that have antioxidant potential. This study aims to determine the IC₅₀ value of kacapiring leaf ethanol extract and to formulate a mask preparation that meets pharmaceutical requirements. The study includes the preparation of the extract using the maceration method with 70% ethanol, characterization of the extract, testing of antioxidant activity using the DPPH method, formulation of the mask with varying extract concentrations of 0%, 4%, 6%, and 8%, and evaluation of the formulations, including organoleptic properties, tapped density, moisture content, pH, homogeneity, adhesion, drying time, spreadability, viscosity, and stability. The results of the study showed that the ethanol extract of kacapiring leaves yielded 36% with a moisture content of 8.24% and an ash content of 1.81%. Phytochemical screening revealed the presence of alkaloids, flavonoids, saponins, tannins, and steroids. Antioxidant activity testing of the extract showed an IC₅₀ value of 33.194 ppm, which falls into the "very strong" category. Physical evaluation of the mask formulations revealed that all formulations had a smooth, homogeneous texture; a pH within the skin's pH range (4.5–6.5); adhesion time of 9.33–11 seconds, and drying time of 24.67–29.67 minutes. Stability testing showed that the formulations remained stable during storage. Based on these results, it can be concluded that the ethanol extract of kacapiring leaves has the potential to be developed as an active ingredient in a safe antioxidant face mask formulation with good physical quality.

Keywords: kacapiring leaves, antioxidants, *mask*, DPPH, *Gardenia jasminoides* J. Ellis