

FORMULASI DAN KARAKTERISASI *HAND BODY LOTION* EKSTRAK ETANOL DAUN KAKAO (*Theobroma cacao* L.) SERTA UJI AKTIVITAS ANTIOKSIDAN

ABSTRAK

Kulit merupakan organ pelindung tubuh yang rentan mengalami kerusakan akibat paparan radikal bebas sehingga memerlukan perawatan menggunakan sediaan kosmetik yang mengandung antioksidan. Daun kakao (*Theobroma cacao* L.) diketahui mengandung senyawa metabolit sekunder yang berpotensi sebagai antioksidan alami. Penelitian ini bertujuan untuk memformulasikan ekstrak etanol daun kakao menjadi sediaan *hand body lotion*, mengevaluasi karakteristik fisik sediaan, serta menentukan aktivitas antioksidannya. Penelitian dilakukan secara eksperimental dengan ekstraksi daun kakao menggunakan metode maserasi dengan etanol 96%. Ekstrak yang diperoleh dikarakterisasi melalui pengujian parameter spesifik, parameter nonspesifik, dan skrining fitokimia. Sediaan dievaluasi meliputi uji organoleptik, homogenitas, pH, daya sebar, viskositas, stabilitas fisik, serta aktivitas antioksidan menggunakan metode DPPH berdasarkan nilai IC_{50} . Hasil penelitian menunjukkan bahwa ekstrak etanol daun kakao memenuhi persyaratan mutu ekstrak dan mengandung senyawa flavonoid, fenolik, saponin, alkaloid, serta steroid. Seluruh formula menghasilkan sediaan yang memiliki karakteristik fisik yang memenuhi persyaratan, stabil selama penyimpanan, dan menunjukkan aktivitas antioksidan dengan kategori sedang hingga kuat. Semakin tinggi konsentrasi ekstrak yang digunakan, semakin baik aktivitas antioksidan yang dihasilkan. Berdasarkan hasil penelitian, ekstrak etanol daun kakao (*Theobroma cacao* L.) berhasil diformulasikan menjadi sediaan *hand body lotion* yang memiliki karakteristik fisik yang baik, stabil, serta berpotensi digunakan sebagai kosmetik berbahan alam yang memiliki aktivitas antioksidan.

Kata kunci: *Theobroma cacao* L., daun kakao, *hand body lotion*, antioksidan, DPPH, IC_{50} .

**FORMULATION AND CHARACTERIZATION OF HAND AND BODY
LOTION CONTAINING ETHANOLIC EXTRACT OF CACAO LEAVES
(*Theobroma cacao* L.) AND EVALUTION OF ITS ANTIOXIDANT
ACTIVITY**

ABSTRACT

The skin is a protective organ that is susceptible to damage caused by exposure to free radicals, making proper skincare essential through the use of cosmetic products containing antioxidants. Cocoa leaves (*Theobroma cacao* L.) are known to contain secondary metabolites with potential as natural antioxidants. This study aimed to formulate the ethanolic extract of cocoa leaves into a hand body lotion, evaluate its physical characteristics, and determine its antioxidant activity. This experimental study employed the maceration method using 96% ethanol to obtain the cocoa leaf extract. The resulting extract was characterized by evaluating its specific and non-specific parameters, as well as conducting phytochemical screening. The formulated hand body lotion was evaluated for its organoleptic properties, homogeneity, pH, spreadability, viscosity, physical stability, and antioxidant activity using the DPPH assay based on the IC₅₀ value. The results demonstrated that the ethanolic extract of cocoa leaves met the required quality standards for herbal extracts and contained flavonoids, phenolic compounds, saponins, alkaloids, and steroids. All formulations exhibited acceptable physical characteristics, remained stable throughout the storage period, and showed moderate to strong antioxidant activity. Increasing the concentration of the extract enhanced the antioxidant activity of the formulation. In conclusion, the ethanolic extract of cocoa leaves (*Theobroma cacao* L.) was successfully formulated into a hand body lotion with good physical characteristics, satisfactory stability, and promising potential as a natural cosmetic product with antioxidant activity.

Keywords: *Theobroma cacao* L., cocoa leaves, hand body lotion, antioxidant, DPPH, IC₅₀.