

**FORMULASI DAN EVALUASI SEDIAAN *HAND BODY LOTION*
BERBASIS EKSTRAK DAUN KIRINYUH (*Chromolaena odorata* L.)
SERTA UJI AKTIVITAS ANTIOKSIDAN DENGAN METODE DPPH**

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ABSTRAK

Paparan radikal bebas dapat merusak kulit dan meningkatkan risiko penuaan dini juga permasalahan lain seperti kulit kering, kasar dan kulit kusam. Radikal bebas adalah molekul tidak stabil dengan elektron tidak berpasangan yang menyebabkan kerusakan sehingga diperlukan antioksidan untuk menetralkannya. Salah satu tanaman yang memiliki aktivitas antioksidan adalah kirinyuh, karena pertumbuhannya cepat tanaman ini dianggap mengganggu sehingga perlu dimanfaatkan potensinya melalui pengembangan sediaan hand body lotion dengan aktivitas antioksidan melalui metode DPPH serta evaluasi sediaan hand body lotion yang mengandung ekstrak daun kirinyuh untuk memastikan sifat fisik yang baik dan stabil. Metode pengujian meliputi evaluasi pengamatan organoleptis, homogenitas, pH, viskositas, daya sebar, daya lekat, uji iritasi dan pengujian stabilitas menggunakan metode suhu ruang (real time) dan suhu ekstrim (cycling test) serta pengujian aktivitas antioksidan menggunakan metode DPPH. Formulasi hand body lotion berbasis ekstrak daun kirinyuh berhasil diformulasikan dan diuji aktivitas dengan metode DPPH. Berdasarkan hasil penelitian yang telah dilakukan Formula 1 hingga Formula 4 menunjukkan nilai IC_{50} dengan kategori sangat kuat. Formula 3 (IC_{50} 32,70 ppm) dan Formula 4 (IC_{50} 20,17 ppm) menunjukkan aktivitas antioksidan paling optimal sedangkan berdasarkan hasil evaluasi fisik, stabilitas dan keamanan Formula 0 Formula 2 dan Formula 3 memenuhi kriteria sifat fisik serta stabil dalam uji siklus dan suhu ruang. Ketiga formula ini juga tidak menimbulkan iritasi kulit sehingga terbukti aman dan stabil.

Kata kunci: Antioksidan, *Chromolaena Odorata*, DPPH, *Hand Body Lotion*, Kirinyuh

**FORMULATION AND EVALUATION OF HAND BODY LOTION AIDE
BASED ON KIRINYUH (*Chromolaena odorata* L.) FLOWER EXTRACT AND
ANTIOXIDANT ACTIVITY TEST BY DPPH METHODS**

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ABSTRACT

Exposure to free radicals can damage the skin and increase the risk of premature aging as well as other problems such as dry, rough and dull skin. Free radicals are unstable molecules with unpaired electrons that cause damage so antioxidants are needed to neutralize them. One of the plants that has antioxidant activity is kirinyuh, because of its fast growth this plant is considered disturbing so it is necessary to utilize its potential through the development of hand body lotion preparations with antioxidant activity through the DPPH method and evaluation of hand body lotion preparations containing kirinyuh leaf extract to ensure good and stable physical properties. The test method includes evaluation of organoleptical observations, homogeneity, pH, viscosity, spreadability, adhesion, irritation test and stability testing using room temperature (real time) and extreme temperature (cycling test) methods and antioxidant activity testing using the DPPH method. The kirinyuh leaf extract-based hand body lotion formulation was successfully formulated and tested for activity using the DPPH method. Based on the results of the research, Formula 1 to Formula 4 showed IC_{50} values with a very strong category. Formula 3 (IC_{50} 32.70 ppm) and Formula 4 (IC_{50} 20.17 ppm) showed the most optimal antioxidant activity while based on the results of physical evaluation, stability and safety Formula 0 Formula 2 and Formula 3 meet the criteria of physical properties and are stable in cycle tests and room temperature. These three formulas also did not cause skin irritation so they proved to be safe and stable.

Keywords: *Antioxidant, Chromolaena Odorata, DPPH, Hand Body Lotion, Kirinyuh*