**PENENTUAN NILAI *SUN PROTECTION FACTOR* (SPF) EKSTRAK ETANOL KULIT BUAH ASAM JAWA (*Tamarindus indica* L.) DAN APLIKASINYA DALAM SEDIAAN *LOTION***

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# ABSTRAK

Tabir surya merupakan sediaan kosmetika yang digunakan dengan maksud melindungi kulit dari paparan sinar matahari dengan cara memantulkan, sehingga dapat mencegah terjadinya gangguan kulit karena terpapar sinar matahari. Untuk menjaga kulit dari efek buruk sinar UV diperlukan perlindungan menggunakan tabir surya. Tujuan penelitian ini adalah untuk mengetahui senyawa kimia metabolit sekunder ekstrak etanol kulit buah asam jawa, melihat aktivitas tabir surya ekstrak etanol kulit buah asam jawa melalui nilai spf serta mengetahui karakterisktik fisik dari sediaan lotion ekstrak etanol kulit buah asam jawa.

Metode yang digunakan pada penelitian ini metode eksperimental. Pada ekstrak etanol kulit buah asam jawa diuji penentuan nilai SPF dengan spektrofotometri UV. Ekstrak etanol kulit buah asam jawa diformulasikan dalam sediaan lotion dengan berbagai konsentrasi dan karakteristik mutu fisik meliputi organoleptis, homogenitas, pH, viskositas, daya sebar, dan daya lekat.

Hasil dan kesimpulan penelitian dapat diketahui karakterisasi simplisia kulit buah asam jawa kadar air 5, kadar sari larut dalam air 17,07, kadar sari larut dalam etanol 10,11, kadar abu total 2,633, kadar abu tidak larut asam 0,286 secara keseluruhan memenuhi standar MMI, skrining fitokimia ekstrak etanol kulit buah asam jawa mengandung flavonoid, saponin, dan triterpenoid. Uji SPF ekstrak etanol kulit buah asam jawa dibuah pada konsentrasi 100 ppm, 300 ppm, 500 ppm, 700 ppm, 1000 ppm dengan hasil berturut-turut 2,2229; 9,819; 15,86; 22,42; 36,22. Organoleptis sediaan lotion secara keseluruhan konsentrasi memiliki bentuk kental dengan warna kecoklatan serta aroma mawar dan homogen, pH keseluruhan konsentrasi 5, viskositas lotion 500 ppm : 7916; 700 ppm : 8853; 1000 ppm : 9233, daya sebar lotion 500 ppm : 5,9 cm; 700 ppm : 6,2 cm; 1000 ppm : 6,2 cm, daya lekat lotion 500 ppm : 4,22 dtk; 700 ppm : 4,53 dtk; 1000 ppm : 4,78 dtk.

**Kata kunci** : Kulit Buah Asam Jawa, Tabir Surya, *Sun Protection Factor* (SPF), *Lotion*, *Tamarindus Indica* L.

**DETERMINATION OF THE VALUE OF SUN PROTECTOR FACTION (SPF) ETHANOL EXTRACT OF JAVA ACID FRUIT (*Tamarindus indica* L.) AND ITS APPLICATION IN *LOTION***

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# ABSTRACT

*Sunscreen is a cosmetic preparation that is used with the intention of protecting the skin from sun exposure by reflecting, so as to prevent skin disorders due to exposure to sunlight. To protect the skin from the bad effects of UV rays, it is necessary to use sunscreen protection. The purpose of this study was to determine the chemical compounds of secondary metabolites of ethanol extract of tamarind peel, see the sunscreen activity of ethanolic extract of tamarind peel through its spf value and determine the physical characteristics of the lotion preparation of ethanol extract of tamarind peel.*

*The method used in this research is an experimental method. The ethanol extract of tamarind fruit peel was tested for determination of value (SPF) by UV spectrophotometry. Ethanol extract of tamarind fruit peel is formulated in lotion preparations with various concentrations and physical quality characteristics including organoleptic, homogeneity, pH, viscosity, spreadability, and adhesion.*

*The results and conclusions of the study can be seen from the simplicia characterization of tamarind peel water content 5, water soluble extract content 17.07, ethanol soluble extract content 10.11, total ash content 2.633, acid insoluble ash content 0.286 overall met the MMI standard, phytochemical screening of ethanol extract of tamarind fruit peel containing flavonoids, saponins, and triterpenoids. The SPF test of ethanol extract of tamarind peel was carried out at concentrations of 100 ppm, 300 ppm, 500 ppm, 700 ppm, 1000 ppm with successive results of 2.2229; 9,819; 15.86; 22.42; 36.22. The overall organoleptic concentration of the lotion preparation has a thick form with a brownish color and a rose aroma and is homogeneous, the overall pH concentration is 5, the viscosity of the lotion is 500 ppm: 7916; 700 ppm : 8853; 1000 ppm : 9233, lotion spreadability 500 ppm : 5.9 cm; 700 ppm : 6.2 cm; 1000 ppm : 6.2 cm, lotion stickiness 500 ppm : 4.22 sec; 700 ppm : 4.53 sec; 1000 ppm : 4.78 sec.*

**Keywords**: *Tamarind Fruit Peel, Sunscreen, Sun Protection Factor (SPF), Lotion*, *Tamarindus Indica* L*.*