

INTISARI

AMBARSARI, K, 2019, Uji Efektivitas Krim Anti-Aging Ekstrak Etanol Kayu Secang (*Caesalpinia Sappan* L.) Pada Telapak Kaki Tikus Galur Wistar (*Rattus Norvegicus* L.) Yang Terpapar Sinar UV-B, Skripsi, Fakultas Farmasi, Universitas Setia Budi, Surakarta.

Radiasi Ultraviolet (UV) dapat memicu terbentuknya radikal bebas. Radikal bebas dapat memberikan efek negatif mempercepat terjadinya penuaan dini akibat stress oksidatif. Antioksidan merupakan salah satu senyawa yang dapat menetralkan dan meredam radikal bebas pada sel sehingga mengurangi terjadinya kerusakan. Kayu secang (*Caesalpinia sappan* L.) merupakan jenis tanaman yang mengandung senyawa flavonoid sebagai antioksidan alami dari luar tubuh manusia. Formulasi sediaan krim dibuat untuk mempermudah pengaplikasian sediaan topikal. Penelitian ini bertujuan untuk mengetahui efektivitas krim ekstrak kayu secang sebagai *Anti-Aging* secara in vivo menggunakan tikus yang dipapar sinar UV-B.

Pengujian menggunakan 20 ekor tikus. Telapak kaki tikus diolesi krim uji dengan konsentrasi 3, 6, dan 9%, kontrol negatif dan kontrol positif lalu diberi paparan sinar UV-B selama 13 menit sehari selama 10 hari. Pengamatan kerutan menggunakan scoring secara visual dan dilanjutkan pengamatan histopatologi. Sifat fisik krim diuji organoleptis, pH, viskositas, daya lekat, daya sebar dan uji *cycling test*. Hasil penelitian dianalisis statistik menggunakan *one way anova*.

Hasil penelitian menunjukkan bahwa sediaan krim ekstrak kayu secang dengan konsentrasi 3, 6, dan 9% memiliki aktivitas anti kerut dengan nilai berturut-turut 23,07%, 46,15%, dan 69,25%. Krim dengan konsentrasi 9% menunjukkan efek paling baik dalam mencegah kerutan pada telapak kaki tikus yang terpapar sinar UV-B yang hampir setara dengan kontrol positif.

Kata kunci: Ekstrak kayu secang, efektivitas *anti-aging*, krim, sinar UV-B

ABSTRACT

AMBARSARI, K, 2019, TEST EFFECTIVENESS OF ANTI-AGING CREAM SECANG ETHANOL EXTRACT (*Caesalpinia sappan* L.) ON THE FOOT OF WISTAR RAT (*Rattus norvegicus* L.) THAT IS EXPOSED BY UV-B LIGHT, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Ultraviolet (UV) radiation can trigger the formation of free radicals. Free radicals can have negative effect to accelerate the occurrence of early aging due to oxidative stress. Antioxidant is one of the compounds that can neutralize and reduce the damaged. Secang (*Caesalpinia sappan* L.) is a type of plant that contains flavonoids as natural antioxidant from outside the human body. Formulation of cream preparations are made to facilitate the application of topical preparations. The study aims to find out effectiveness of *anti-aging* cream secang wood extract by *in vivo* on the palm foot of rat that is exposed by UV-B light.

The test used 20 rats. The palm foot of rat were smeared with cream test with concentration 3, 6, 9%, negative controls, and positive controls then were exposed by UV-B light for 13 minutes a day for 10 days. Observation wrinkles using visual scoring and followed by histology observation. The physical properties of the cream were tested for organoleptic, pH, viscosity, adhesion, dispersion, and cycling test. The result of the study were analyzed statistically using one way anova.

The result of the study showed that cream of secang wood extract with concentration 3, 6, and 9% have activity anti wrinkle with score consecutive also 23,07%, 46,15%, and 69,25%. The cream with concentration 9% showed the best effect in preventing wrinkles on the foot of rat that is exposed by UV-B light was almost equivalent to positive control.

Keywords: Secang wood extract, effectiveness of *anti-aging*, cream, UV-B light