

ABSTRAK

WICAKSONO, SALSABILA MELLIA PUTRI., 2022, FORMULASI DAN UJI AKTIVITAS KRIM ANTI AGING EKSTRAK DAUN SIRIH (*Piper betle* L.) DENGAN VARIASI KONSENTRASI GLISERIN DAN PROPILEN GLIKOL PADA KULIT PUNGGUNG KELINCI PUTIH NEW ZEALAND, PROPOSAL SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh apt. Dewi Ekowati, M.Sc dan apt. Sri Rejeki Handayani, M.Farm

Penuaan adalah peristiwa alami dari makhluk hidup yang disebabkan oleh faktor ekstrinsik salah satunya adalah sinar ultraviolet. Pada penelitian ini akan dilakukan pembuatan formulasi sediaan krim *anti-aging* ekstrak daun sirih (*Piper betle* L.) dan uji aktivitas *anti-aging* pada kulit punggung kelinci putih New Zealand. Penelitian ini bertujuan untuk mengetahui penyembuhan kerutan pada kulit punggung kelinci akibat paparan sinar UV-A.

Metode ekstraksi yang digunakan menggunakan metode maserasi. Ekstrak daun sirih dibuat formulasi krim kemudian dilakukan uji mutu fisik krim yaitu organoleptis, tipe krim, homogenitas, pH, daya sebar, daya lekat, viskositas, dan stabilitas. Kulit pada punggung kelinci dioles krim kontrol negatif, kontrol positif, krim ekstrak daun sirih dengan variasi gliserin 5% propilen glikol 15%, gliserin 10% propilen glikol 10%, gliserin 15% propilen glikol 5%.

Untuk hasil stabilitas pada krim ekstrak daun sirih diperoleh hasil bahwa semua uji mutu fisik stabil. Hasil uji iritasi menggunakan metode Draize diperoleh hasil bahwa krim ekstrak daun sirih tidak mengiritasi kulit. Uji aktivitas *anti-aging* menunjukkan sediaan krim ekstrak daun sirih dengan variasi konsentrasi gliserin 10% propilen glikol 10% dan gliserin 5% propilen glikol 15% paling efektif mengurangi kerutan pada kulit punggung kelinci.

Kata kunci: aktivitas *anti-aging*, ekstrak daun sirih, formulasi, krim, *skin analyzer*

ABSTRACT

WICAKSONO, SALSABILA MELLIA PUTRI., 2022, FORMULATION AND TESTING ACTIVITY OF ANTI AGING CREAM EXTRACT OF BELT (*Piper betle* L.) WITH VARIATIONS OF GLYCERINE AND PROPYLENE GLYCOL CONCENTRATIONS ON THE BACK SKIN OF WHITE RABBIT NEW ZEALAND, PROPOSAL OF THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA. Supervised by apt. Dewi Ekowati, M.Sc and apt. Sri Rejeki Handayani, M.Farm.

Aging is a natural event of living things caused by extrinsic factors, one of which is ultraviolet light. In this study, the formulation of an anti-aging cream preparation of betel leaf extract (*Piper betle* L.) and the anti-aging activity test on the back skin of white rabbits in New Zealand will be carried out. This study aims to determine the healing of wrinkles on the back skin of rabbits due to exposure to UV-A rays.

The extraction method used is the maceration method. The betel leaf extract was made into a cream formulation and then tested for the physical quality of the cream, namely organoleptic, cream type, homogeneity, pH, spreadability, adhesion, viscosity, and stability. The skin on the rabbit's back was smeared with negative control cream, positive control cream, betel leaf extract cream with variations of glycerin 5% propylene glycol 15%, glycerin 10% propylene glycol 10%, glycerin 15% propylene glycol 5%.

For stability results on cream of betel leaf extract, it was found that all physical quality tests were stable. The results of the irritation test using the Draize method showed that the betel leaf extract cream did not irritate the skin. Anti-aging activity test showed that betel leaf extract cream with various concentrations of glycerin 10% propylene glycol 10% and glycerin 5% propylene glycol 15% was the most effective in reducing wrinkles on the rabbit's back skin.

Keywords : *anti-aging* activity, betel leaf extract, cream, formulation, *skin analyzer*