

ABSTRAK

JUNIOR AZNI FACHRIZA, 2024, PENGARUH EMULGATOR ASAM STEARAT DAN TRIETANOLAMIN TERHADAP AKTIVITAS ANTI AGING KRIM EKSTRAK DAUN KELOR (*Moringa oleifera* L.), SKRIPSI, PROGRAM STUDI S1 FARMASI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh apt. Reslely Harjanti, S.Farm., M.Sc. dan apt. Nur Anggreini Dwi Sasangka, S.Farm., M.Sc.

Daun kelor (*Moringa oleifera* L.) memiliki aktivitas antioksidan karena mengandung senyawa flavonoid yang berkhasiat sebagai peredam radikal bebas sehingga berpotensi sebagai *anti aging*. Tujuan penelitian ini untuk mengetahui pengaruh variasi konsentrasi emulgator anionik yaitu asam stearat dan TEA terhadap mutu fisik dan aktivitas *anti aging* dengan melihat kadar penghambat tirosinase formulasi krim ekstrak daun kelor (*Moringa oleifera* L.).

Ekstrak daun kelor dibuat dengan metode maserasi menggunakan pelarut etanol 70%. Penelitian ini menggunakan 5 formula dengan tambahan kontrol positif. Formula 1, 2, 3, dan 4 merupakan krim ekstrak daun kelor dengan masing-masing konsentrasi TEA dan asam stearat berturut-turut 2:14, 2:16, 3:18, 4:20. Formula 5 merupakan kontrol negatif berupa basis krim dan kontrol positif berupa krim *anti aging* yang ada di pasaran. Aktivitas *anti aging* krim diuji menggunakan uji penghambat tirosin serta diamati mutu fisiknya. Hasil pengujian selanjutnya diuji statistik menggunakan *One Way Anova* dan dilanjut uji Duncan.

Hasil penelitian menunjukkan bahwa variasi emulgator asam stearat dan TEA mempengaruhi mutu fisik krim ekstrak daun kelor dan mempengaruhi aktivitas *anti aging* krim, akan tetapi semua formula termasuk dalam *anti aging* yang sedang. Formula 1 merupakan formula paling baik dengan mutu fisik yang sesuai persyaratan dan mendekati kontrol positif serta memiliki nilai IC_{50} aktivitas penghambat tirosin paling baik yaitu 118,23 ppm.

Kata kunci : daun kelor, mutu fisik krim, *anti aging*.

ABSTRACT

JUNIOR AZNI FACHRIZA, 2024, EFFECT OF STEARIC ACID AND TRIETANOLAMINE EMULSIFIERS ON ANTI AGING FOR THE ACTIVITY OF CREAM MORAGE LEAF EXTRACT (*Moringa oleifera* L.) CREAM, THESIS, BACHELOR OF PHARMACY, FACULTY OF PHARMACY, SETIA BUDI, SURAKARTA. Supervised by apt. Reslely Harjanti, S.Farm., M.Sc. and apt. Nur Anggreini Dwi Sasangka, S.Farm., M.Sc.

Moringa leaves (*Moringa oleifera* L.) have antioxidant activity because they contain flavonoid compounds which are efficacious as free radical scavengers so they have the potential as anti-aging. The purpose of this study was to determine the effect of variations in the concentration of anionic emulsifiers, namely stearic acid and TEA, on physical quality and anti-aging activity by looking at the levels of tyrosinase inhibitors in cream formulations of Moringa leaf extract (*Moringa oleifera* L.).

Moringa leaves extract was prepared by maceration method using 70% ethanol solvent. This study uses 5 formulas with the addition of a positive control. Formulas 1, 2, 3, and 4 are moringa leaf extract creams with respective concentrations of TEA and stearic acid, respectively 2:14, 2:16, 3:18, 4:20. Formula 5 is a negative control in the form of a cream base and a positive control in the form of an anti-aging cream on the market. The cream's anti-aging activity was tested using a tyrosine inhibitor test and its physical quality was observed. The test results were then tested statistically using One Way Anova and continued with Duncan's test

The results showed that variations in emulsifying stearic acid and TEA affected the physical quality of the Moringa leaf extract cream and affect the anti aging activity of the cream, but all formulas are included in moderate anti aging. Formula 1 is the best formula with physical quality that meets the requirements and is close to the positive control and has the highest IC50 value of tyrosine inhibitory activity, namely 118.23 ppm.

Keywords : Moringa leaf, quality and physical cream, anti aging.