ABSTRAK

Daun alpukat (*Persea americana* Mill.) mengandung senyawa flavonoid yang terbukti memiliki efek sinergis dalam menangkal radikal bebas. Ekstrak daun alpukat yang memiliki aktivitas antioksidan diformulasikan ke dalam sediaan krim. Penelitian ini bertujuan untuk mengetahui adanya aktivitas antioksidan ekstrak daun alpukat, mengetahui pengaruh penambahan asam stearat dan triethanolamine terhadap sifat fisik dan stabilitas fisik sediaan krim ekstrak daun alpukat, serta mengetahui komposisi optimum asam stearat dan triethanolamine dalam formula krim ekstrak daun alpukat.

Uji aktivitas antioksidan dilakukan menggunakan reagen DPPH (*1,1-diphenyl-2- picrylhydrazyl)* dan diukur menggunakan alat spektrofotometer UV-Vis. Hasil uji aktivitas antioksidan dilihat dengan cara menghitung persentase inhibisinya. Hasil sifat fisik sediaan krim yang diuji meliputi pengamatan organoleptis, pH, daya lekat, daya sebar, dan viskositas. Parameter uji stabilitas fisik sediaan krim meliputi data viskositas dan daya sebar. Analisis data dilakukan menggunakan *Software Design Expert 12 free trial* dan *Software SPSS* versi *22.*

Pada penelitian didapatkan hasil bahwa ekstrak daun alpukat memiliki aktivitas antioksidan. Triethanolamine berpengaruh secara dominan pada respon viskositas yaitu sebesar 72,6737 % dan asam stearat berpengaruh secara dominan pada respon daya sebar yaitu sebesar 45,1792 %. Salah satu komposisi optimum yang didapatkan yaitu asam stearat 5 gram dan triethanolamine 2 gram.

Kata kunci: antioksidan, desain faktorial, ekstrak daun alpukat, *freeze thaw cycle*, sediaan krim.

ABSTRACT

Avocado leaves (Persea americana Mill.*) contain flavonoids which are proven to have a synergistic effect in warding off free radicals. Avocado leaf extract which has antioxidant activity is formulated into a cream preparation. This study aims to determine the antioxidant activity in avocado leaf extract, determine the effect of the addition of stearic acid and triethanolamine in avocado leaf extract cream preparations, and determine the optimum composition of stearic acid and triethanolamine in avocado leaf extract cream preparations.*

The antioxidant activity test was carried out using reagent DPPH (*1,1-diphenyl-2- picrylhydrazyl) and measured using a UV-Vis spectrophotometer. The results of the antioxidant activity test were seen by calculating the percentage of inhibition. The results of the physical properties of the cream preparations tested included observations of organoleptic, pH, adhesion, spreadability, and viscosity. The physical stability test parameters for cream preparations include data on viscosity and dispersibility. Data analysis was performed using software Design Expert 12 free trial and software SPSS 22 version.*

The result of this study, it was found that the avocado leaf extract had antioxidant activity. Triethanolamine has a dominant effect on the viscosity response of 72.6737% and stearic acid has a dominant effect on the spreadability response of 45.1792%. One of the optimum compositions obtained is 5 grams of stearic acid and 2 grams of triethanolamine.

Keywords*: antioxidant, factorial design, avocado leaf extract, freeze thaw cycle, cream preparation.*