

## ABSTRAK

**WINDOYO, S., 2021 UJI AKTIVITAS EMULGEL EKSTRAK ETANOL DAUN KERSEN (*Muntingia calabura* L) SEBAGAI TABIR SURYA SECARA *IN VITRO*, PROPOSAL SKRIPSI, PROGRAM STUDI S1 FARMASI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh apt. Reslely Harjanti, S.Farm., M.Sc. dan apt. Anita Nilawati, M.Farm.**

Radikal bebas berlebih menimbulkan penyakit dan kondisi degeneratif. Zat antioksidan digunakan sebagai tindakan preventif terhadap radikal bebas. Penggunaan tabir surya salah satu pencegahan radikal bebas. Ekstrak etanol daun kersen (*Muntingia calabura* L) memiliki khasiat sebagai tabir surya alami. Emulgel membantu pemakaian sebagai sediaan tabir surya. Tujuan penelitian adalah untuk mengetahui stabilitas dan mutu fisik serta aktivitas tabir surya emulgel ekstrak etanol daun kersen.

Penelitian ini menggunakan 3 formula dengan perbedaan konsentrasi zat aktif yaitu 1; 2; 4 %. Sediaan emulgel ekstrak etanol daun kersen dilakukan pengujian stabilitas dan mutu fisik. Uji aktivitas tabir surya emulgel secara *in vitro* menggunakan spektrofotometri UV. Data diolah secara statistik dengan SPSS.

Hasil penelitian menunjukkan bahwa emulgel ekstrak etanol daun kersen dengan variasi konsentrasi ekstrak etanol daun kersen sebagai zat aktif memenuhi stabilitas dan mutu fisik yang baik. Konsentrasi ekstrak berpengaruh terhadap aktivitas tabir surya yaitu semakin tinggi konsentrasi ekstrak semakin tinggi nilai SPF yang didapat. Nilai SPF emulgel ekstrak etanol daun kersen yang diperoleh pada formula 1 (0,647); formula 2 (3,786); formula 3 (6,017); dan formula 4 (10,265). Nilai SPF emulgel ekstrak etanol daun kersen setelah diuji stabilitas diperoleh nilai pada formula 1 (0,389); formula 2 (2,966); formula 3 (5,294); dan formula 4 (10,010).

Kata kunci : *Muntingia calabura* L, emulgel, tabir surya, spektrofotometri UV

## ***ABSTRACT***

**WINDOYO, S., 2021 ACTIVITY TEST OF KERSEN LEAVES ETHANOL ETHANOL EXTRACT (*Muntingia calabura L*) AS IN VITRO SURYA TABLES, THESE PROPOSALS, STUDY PROGRAM OF PHARMACY, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY. Supervised by apt. Reslely Harjanti, S.Farm., M.Sc. and apt. Anita Nilawati, M.Farm.**

Excess free radicals cause degenerative diseases and conditions. Antioxidants are used as a preventive action against free radicals. The use of sunscreen is one of the prevention of free radicals. Cherry leaf ethanol extract (*Muntingia calabura L*) has properties as a natural sunscreen. Emulgel helps use as a sunscreen preparation. The research objective was to determine the stability and physical quality as well as the sunscreen activity of the ethanol extract of cherry leaves emulgel.

This study used 3 formulas with different concentrations of active substances, namely 1; 2; and 4%. Cherry leaf ethanol extract emulgel was tested for its stability and physical quality. In vitro emulgel sunscreen activity test using UV spectrophotometry. The data were statistically processed with SPSS.

The results showed that the ethanol extract of cherry leaves with various concentrations of ethanol extract of cherry leaves as the active substance to meet the physical quality and good stability. The concentration of the extract affects the activity of the sunscreen, namely the higher the concentration of the extract, the higher the SPF value obtained. The SPF value of the ethanol extract of cherry leaf emulgel obtained in formula 1 (0.647); formula 2 (3,786); formula 3 (6.017); and formula 4 (10.265). The SPF value of the ethanol extract of cherry leaf emulgel after being tested succeeded in obtaining a value in formula 1 (0.389); formula 2 (2,966); formula 3 (5.294); and formula 4 (10,010).

Keywords: *Muntingia calabura L*, emulgel, sunscreen, UV spectrophotometr