

INTISARI

YULIANTORO B. A., 2020, UJI AKTIVITAS EMULGEL MINYAK ATSIRI DAUN JERUK PURUT (*Citrus hystrix* DC.) SEBAGAI *SUN PROTECTING FACTOR* (SPF) SECARA *IN VITRO*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Radikal bebas adalah kerusakan dalam tubuh akibat induksi molekul. Antioksidan mencegah dampak paparan radikal bebas. Minyak atsiri daun jeruk purut (*Citrus hystrix* DC.) bermanfaat sebagai antioksidan dan SPF. Emulgel sediaan yang dirancang sebagai *Sun Protecting Factor* (SPF). Tujuan penelitian adalah untuk mengetahui mutu fisik dan stabilitas, serta aktivitas SPF emulgel minyak atsiri daun jeruk purut.

Minyak atsiri daun jeruk purut dibuat emulgel 3 variasi konsentrasi yaitu 15; 20; dan 25 %. Sediaan emulgel diuji mutu fisik dan stabilitas. Uji aktivitas emulgel sebagai SPF secara *in vitro* menggunakan spektrofotometer UV. Data diolah dengan statistik *Kolmogrov-smirnov/Saphiro-wilk*, dilanjutkan uji *one way anova/kruskal walis*, kemudian dilakukan *uji paired t test/Wilcoxon*.

Emulgel minyak atsiri daun jeruk purut konsentrasi 15; 20; dan 25 % memiliki mutu fisik dan stabilitas yang baik. Nilai SPF emulgel minyak atsiri daun jeruk purut adalah basis 0,450; F1 4,801; F2 5,230; dan F3 17,148. Nilai SPF emulgel minyak atsiri daun jeruk purut setelah uji stabilitas adalah basis 0,404; F1 4,473; F2 4,729; dan F3 SPF 9,637.

Kata kunci: *Citrus hystrix* DC., emulgel, spektrofotometer UV, SPF.

ABSTRACT

YULIANTORO B. A., 2020, ACTIVITY TEST OF EMULGEL ESSENTIAL OIL OF KAFFIR LIME LEAVES (*Citrus hystrix* DC.) AS A SUN PROTECTING FACTOR (SPF) IN VITRO, SKRIPSI, FACULTY OF PHARMACY, UNIVERSITY OF SETIA BUDI, SURAKARTA.

Free radicals are molecular damage in the body caused by induced of a molecule. Antioxidants are used to prevent the effects of free radical. Essential oil of kaffir lime leaves (*Citrus hystrix* DC.) are used to antioxidant and SPF. Emulgel is designed for Sun Protecting Factor (SPF). The aimed of this research is determined the physical quality, stability and SPF of emulgel.

The kaffir lime leaves essential oils was made of emulgel formulation with 3 various concentration they are 15; 20; dan 25%. The emulgel were evaluated for physical quality and stability. The activity emulgel as SPF were evaluated by in vitro using UV spectrophotometer. The result was processed with Kolmogrov-Smirnov/Saphiro-Wilk statistics, and continued with one way ANOVA/Kruskal walis test, and paired t test/Wilcoxon.

Emulgel with concentrations of essential oil kaffir lime leaves 15; 20; 25% have a good physical quality and stability. The SPF value of emulgel there are base formula 0,450; F1 4,801; F2 5,230; and F3 17,148. The SPF value of emulgel after the stability tested there are base formula 0,404; F1 4,473; F2 4,729; and F3 9,637.

Keywords: *Citrus hystrix* DC., UV spectrophotometer, SPF, Emulgel.