

INTISARI

ELSA YULIANTI, 2022, FORMULASI DAN UJI AKTIVITAS ANTIBAKTERI SEDIAAN EMULGEL ANTIJERAWAT MINYAK ATSIRI KULIT BATANG KAYU MANIS (*Cinnamomum burmanii*) TERHADAP BAKTERI *Staphylococcus aureus*, SKRIPSI, PROGRAM STUDI S1 FARMASI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh apt. Siti Aisiyah, M.Sc. dan apt. Fransiska Leviana, S.Farm., M.Sc.

Jerawat ialah penyakit kulit yang sering dialami kalangan remaja ketika mengalami masa pubertas. Kelenjar aktif yang tertimbun serta tersumbat karena adanya kotoran dapat memicu terjadinya infeksi akibat terdapatnya kontaminasi bakteri *Staphylococcus aureus*. Kulit batang kayu manis mempunyai aktivitas antibakteri karena senyawa yang terkandung didalamnya yaitu senyawa eugenol dan sinamaldehyd yang mampu menghambat aktivitas pertumbuhan bakteri *Staphylococcus aureus*.

Minyak atsiri kulit batang kayu manis sebesar 1% dibuat sediaan emulgel dengan konsentrasi HPMC 2% ; 2,5% ; 3%. Sediaan emulgel diuji organoleptis, pH, daya lekat, daya sebar, homogenitas, viskositas serta stabilitas dan uji aktivitas antibakteri dengan metode sumuran. Hasil data dilanjutkan dengan pengujian analisis statistik menggunakan SPSS dengan uji *Paired T-test*.

Hasil penelitian menunjukkan sediaan emulgel minyak atsiri kulit batang kayu manis dengan konsentrasi basis 2%, 2,5%, dan 3% memiliki mutu fisik yang baik dan stabilitas yang tidak stabil. Konsentrasi basis berpengaruh terhadap stabilitas sediaan. Semakin tinggi konsentrasi basis semakin baik stabilitas yang dihasilkan. Hasil uji aktivitas antibakteri dengan minyak atsiri kulit batang kayu manis sebesar 1% diperoleh hasil zona hambat yang kuat pada emulgel dimana F4, F5 dan F6 diperoleh zona hambat sebesar 19,67 mm, 19,5 mm, dan 20,33 mm. Formulasi 1, 2, dan 3 tidak dihasilkan zona hambat yang terbentuk.

Keywords: *Staphylococcus aureus*, *Cinnamomum burmanii*, emulgel, antibakteri

ABSTRACT

ELSA YULIANTI, 2022, FORMULATING AND TESTING ANTI-BACTERIAL ACTIVITY OF ANTI-ACNE EMULGEL PREPARATIONS OF CinnamonSKIN ESSENTIAL OIL (*Cinnamomum burmanii*) AGAINST BACTERIA *Staphylococcus aureus*, THESIS, S1 PHARMACEUTICAL STUDY PROGRAM, FACULTY OF PHARMACEUTICAL, SETIA BUDI UNIVERSITY, SURAKARTA. Supervised by apt. Siti Aisiyah, M.Sc. and apt. Fransiska Leviana, S.Farm., M.Sc.

Acne is a skin disease that is often experienced by teenagers during puberty. Active glands that are buried and clogged due to dirt can trigger infection due to contamination with *Staphylococcus aureus*. Cinnamon bark has antibacterial activity because the compounds contained in it are eugenol and cinnamaldehyde compounds which can inhibit the growth activity of *Staphylococcus aureus*.

Cinnamon bark essential oil of 1% was made into an emulgel preparation with a concentration of 2% HPMC; 2.5% ; 3%. Emulgel preparations were tested for organoleptic, pH, adhesion, spreadability, homogeneity, viscosity and stability and antibacterial activity test using the well method. The results of the data continued with statistical analysis testing using SPSS with *Paired T-test*.

The results showed that cinnamon bark essential oil emulgel preparations with base concentrations of 2%, 2.5%, and 3% had good physical quality and unstable stability. Base concentration affects the stability of the preparation. The higher the concentration of the base the better the resulting stability. The results of the antibacterial activity test with 1% cinnamon bark essential oil obtained a strong inhibition zone on the emulgel where F4, F5 and F6 obtained inhibition zones of 19.67 mm, 19.5 mm, and 20.33 mm. Formulation 1, 2, and 3 did not produce inhibition zones formed.

Keywords: *Staphylococcus aureus*, *Cinnamomum burmanii*, emulgel, *Antibacterial*