

INTISARI

RAHMAWATI, E.R. 2020. UJI AKTIVITAS ANTIBAKTERI LOTION MINYAK ATSIRI RIMPANG TEMU PUTIH (*Curcuma zeodaria* [Berg.] Roscoe) TERHADAP *Staphylococcus aureus* ATCC 25923, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Rimpang temu putih berkhasiat sebagai antibakteri, salah satunya terhadap *Staphylococcus aureus*. Minyak atsiri rimpang temu putih diterapkan dalam sediaan *lotion* sebagai alternatif dalam pengobatan. Penelitian ini bertujuan untuk membuat sediaan *lotion* minyak atsiri rimpang temu putih dan menguji aktivitas antibakteri *lotion* minyak atsiri rimpang temu putih terhadap *Staphylococcus aureus* ATCC 25923.

Metode pengujian dalam penelitian ini adalah destilasi uap, menggunakan pelarut air. Minyak atsiri rimpang temu putih diformulasikan menjadi sediaan *lotion* dengan variasi konsentrasi asam stearat yaitu 4%, 5%, dan 6% dengan penambahan konsentrasi minyak atsiri pada masing-masing formula 4%. Uji mutu fisik *lotion* minyak atsiri temu putih meliputi uji organoleptis, uji daya sebar, uji daya lekat, uji daya sebar, uji pH dan uji viskositas. Uji aktivitas antibakteri *lotion* minyak atsiri rimpang temu putih dilakukan dengan metode difusi cakram. Hasil penelitian uji mutu fisik dianalisis secara statistik dengan metode *Two Way Anova* dan hasil uji difusi dianalisis dengan metode *One Way Anova*.

Hasil menunjukkan adanya pengaruh kenaikan konsentrasi asam stearat terhadap sifat fisik yaitu menurunkan viskositas dan daya sebar serta menaikkan daya lekat. Pada uji aktivitas antibakteri menunjukkan bahwa konsentrasi penambahan asam stearat menurunkan aktivitas antibakteri *lotion* minyak atsiri rimpang temu putih. Ketiga formula memiliki daya hambat terhadap *Staphylococcus aureus* ATCC 25923, dimana pada formula I memiliki daya hambat paling tinggi yaitu $\pm 12,32$ mm.

Kata kunci : minyak atsiri, rimpang temu putih (*Curcuma zedoaria* [Berg. Roscoe]), *lotion*, antibakteri, *Staphylococcus aureus*.

ABSTRACT

RAHMAWATI, E.R. 2020, ACTIVITY TEST OF ANTIBACTERIAL LOTION ESSENTIAL OIL RHIZOME *Curcuma zedoaria* (*Curcuma zedoaria* [Berg.] Roscoe.) TO *Staphylococcus aureus* ATCC 25923, FACULTY PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Essential oil have properties as an antibacterial agent, one of which is against the *Staphylococcus aureus* bacteria. Essential oil *Curcuma zedoaria* is applied in lotion preparations as an alternative in medicine. This study aims to make the preparation of *Curcuma zedoaria* rhizome essential oil lotion and to test the antibacterial activity of *Curcuma zedoaria* rhizome essential oil against *Staphylococcus aureus* ATCC 25923.

The testing method in this research is steam distillation, using water solvent. *Curcuma zedoaria* rhizome essential oil is formulated into a lotion preparation with a variation of stearic acid concentration of 4%, 5%, and 6% with the addition of *Curcuma zedoaria* essential oil concentrations in each formula 4%. The physical quality test of essential oil lotion includes organoleptic test, spreadability test, adhesion test, pH test, and viscosity test. The antibacterial activity test for lotion of *Curcuma zedoaria* rhizome essential oil was carried out by disc diffusion method. The result of the physical quality test were statistically analyzed by the Two Way Anova method and the diffusion test results were analyzed by the One Way Anova method.

The results show the effect of an increase in the concentration of stearic acid on physical properties, namely reducing the viscosity and spreadability and increasing adhesion. In the antibacterial activity test showed that the concentration of the addition of stearic acid decreased the antibacterial activity of lotion essential oil. The three formulas have inhibition against *Staphylococcus aureus* ATCC 25923, which in formula I has the highest inhibition of $\pm 12,32$ mm.

Key word : *Curcuma zedoaria* rhizome essential oil (*Curcuma zedoaria* [Berg.] Roscoe.), lotion, antibacterial, *Staphylococcus aureus*.