INTISARI

AMARTA, WISKY., 2018, UJI AKTIVITAS ANTIBAKTERI GEL *HAND SANITIZER* EKSTRAK ETANOL DAUN STEVIA *(Stevia rebaudiana* Bertoni*)* TERHADAP BAKTERI *Staphylococcus aureus* ATCC 25923, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Daun stevia diketahui memiliki aktivitas antibakteri terhadap bakteri *Staphylococcus aureus.* Daun stevia tidak dapat secara langsung membunuh bakteri, oleh karena itu daun stevia di ekstrak terlebih dahulu lalu di formulasi menjadi sediaan gel *hand sanitizer* dengan beberapa jenis formula dengan variasi konsentrasi ekstrak etanol. Tujuan penelitian ini untuk memformulasi sediaan gel *hand sanitizer* ekstrak etanol daun stevia dan menguji sifat fisik, stabilitas, dan aktivitasnya terhadap bakteri *Staphylococcus aureus.*

Daun stevia diekstraksi dengan metode maserasi selama 5 hari dengan pelarut etanol 70%. Ekstrak etanol daun stevia di formulasi menjadi 3 formula dengan perbedaan konsentrasi ekstrak etanol 10%, 15%, dan 20%. Sediaan gel dari setiap formula di uji organoleptis, homogenitas, pH, viskositas, daya sebar, dan daya lekat, stabilitasnya dan aktivitasnya terhadap bakteri *Staphylococcus aureus.* Data yang dianalisa secara statistik dengan uji *kolmogorov-smirnov* dilanjutkan dengan uji two way anova.

Hasil penelitian menyatakan bahwa ekstrak etanol daun stevia dapat dibuat menjadi sediaan gel *hand sanitizer* dan mempunyai aktivitas antibakteri. Perbedaan konsentrasi ekstrak etanol 10%, 15% dan 20% berpengaruh terhadap sifat fisik sediaan gel dan stabilitasnya. Gel *hand sanitizer* dengan berbagai konsentrasi ekstrak etanol daun stevia memiliki aktivitas antibakteri. Hasil uji statistik terhadap aktivitas antibakteri menyatakan bahwa ketiga formula memiliki aktivitas antibakteri yang berbeda secara signifikan.

Kata kunci : *Stevia rebaudiana* Bertoni, ekstrak etanol, gel *hand sanitizer*, antibakteri, *Staphylococcus aureus.*

ABSTRACT

AMARTA, WISKY., 2018, TEST OF ANTIBACTERIAL ACTIVITY OF GEL *HAND SANITIZER* EXTRACT ETANOL STEVIA LEAF (*Stevia rebaudiana* Bertoni) TO BACTERIA *Staphylococcus aureus* ATCC 25923, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Stevia leaves are known to have antibacterial activity against *Staphylococcus aureus* bacteria. Stevia leaves can not directly kill the bacteria, therefore stevia leaves are extracted first and then formulated into gel preparation *hand sanitizer* with several types of formula with variation concentration of ethanol extract. The aim of this study was to formulate gel preparation hand sanitizer extract ethanol stevia leaves and to test the physical characteristic, stability, and its activity against bacteria *Staphylococcus aureus*.

Stevia leaves were extracted using a maceration method for 5 days with 70% ethanol solvent. Stevia leaf ethanol extract was formulated into 3 formulas with concentration differences of ethanol extract: 10%, 15%, and 20%. The gel preparation of each formula was tested of its organoleptic, homogeneity, pH, viscosity, dispersion, and adhesion, stability and activity against *Staphylococcus aureus* bacteria. The data were analyzed statistically using kolmogorov-smirnov test followed by two way anova test.

The results of the experiment indicated that the extract of ethanol stevia leaves can be made into gel preparation *hand sanitizer* and have antibacterial activity. The difference of ethanol extract concentration 10%, 15% and 20% effected on physical characteristic of gel preparation and its stability. Gel hand sanitizers with various concentrations of ethanol extract of stevia leaves have antibacterial activity. Statistical test results on antibacterial activity indicated that the three formulas have significantly different antibacterial activity.

Keywords: *Stevia rebaudiana* Bertoni, ethanol extract, gel *hand sanitizer*, antibacterial, *Staphylococcus aureus.*