

INTISARI

PRATIWI, D.A., 2022, PENGARUH VARIASI KONSENTRASI CARBOPOL 940 TERHADAP MUTU FISIK GEL *HAND WASH* EKSTRAK DAUN KERSEN (*Muntingia calabura* L.) TERHADAP BAKTERI *Staphylococcus aureus* ATCC 25923, SKRIPSI, PROGRAM STUDI S1 FARMASI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA, Dibimbing oleh apt. Siti Aisyah, M.Sc., dan apt. Fransiska Leviana, S.Farm., M.Sc.

Daun kersen mempunyai aktivitas antibakteri terhadap *Staphylococcus aureus*. Daun kersen diketahui mengandung senyawa aktif yang berperan sebagai antibakteri yakni flavonoid, saponin dan tanin. Pengembangan sediaan dalam bentuk sediaan gel *hand wash* karena memiliki formulasi hidrogel yang mampu meningkatkan kenyamanan dalam penggunaan. Tujuan penelitian ini untuk mengetahui pengaruh variasi konsentrasi karbopol 940 terhadap mutu fisik dan stabilitas serta aktivitas yang baik terhadap bakteri *S. aureus*.

Ekstrak daun kersen diperoleh menggunakan metode maserasi dengan pelarut etanol 96%. Formulasi gel *hand wash* dibuat dengan variasi konsentrasi karbopol 940 1,0; 1,5; dan 2,0%. Mutu fisik gel *hand wash* diuji organoleptis, homogenitas, viskositas, daya sebar, daya lekat, dan pH. Aktivitas antibakteri diuji dengan menggunakan metode difusi cakram. Data hasil uji mutu fisik dan diameter zona hambat dianalisis secara statistik dengan uji Shapiro-wilk dan dilanjutkan dengan uji *One Way Anova*.

Hasil dari penelitian ini didapatkan bahwa berdasarkan pengujian mutu fisik dan stabilitas serta aktivitas antibakteri sediaan menunjukkan variasi konsentrasi karbopol 940 1,0; 1,5; dan 2,0% memiliki pengaruh terhadap peningkatan viskositas, daya lekat, dan penurunan daya sebar sediaan gel *hand wash* serta memiliki aktivitas antibakteri yang baik terhadap *Staphylococcus aureus*. Formula II merupakan formula terbaik dengan konsentrasi karbopol 1,5% dan daya hambat rata-rata 15,69 mm.

Kata kunci : Karbopol 940, *Muntingia calabura* L, gel *hand wash*, *Staphylococcus aureus*.

ABSTRACT

PRATIWI, D.A., 2022, THE EFFECT OF VARIATIONS OF CARBOPOL 940 CONCENTRATION ON THE PHYSICAL QUALITY OF HAND WASH GEL EXTRACT OF KERSEN (*Muntingia calabura* L.) LEAVES ON *Staphylococcus aureus* ATCC 25923, THESIS, BACHELOR OF PHARMACY, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, Supervised by apt. Siti Aisiyah, M.Sc., and apt. Fransiska Leviana, S.Farm., M.Sc.

Kersen leaves have antibacterial activity against *Staphylococcus aureus*. Kersen leaves are shunned to contain active compounds which act as antibacterial flavonoids, saponins and tannins. The development of the preparation in the form of a hand wash gel because it has a hydrogel formulation that can increase comfort in use. The purpose of this study is to determine the effect of variations in carbopol concentration 940 on physical quality and stability and good activity on *S. aureus* bacteria.

Kersen leaf extract was obtained using the maceration method with 96% ethanol solvent. Hand wash gel formulations are made with variations in carbopol concentrations of 940 1.0; 1.5; and 2.0%. Physical quality hand wash gel was tested organoleptics, homogeneity, viscosity, spread power, stickiness, and pH. Antibacterial activity was tested using the disc diffusion method. Data on physical quality test results and inhibitory zone diameters are analyzed statistically with the Shapiro-wilk test and continued with the One Way Anova test.

The results of this study were found that based on physical quality testing and stability and antibacterial activity of the preparation showed variations in carbopol concentrations of 940 1.0; 1.5; and 2.0% have an influence on increasing viscosity, sticky power, and decreased spread of hand wash gel preparations and has good antibacterial activity against *Staphylococcus aureus*. Formula II is the best formula with a carbopol concentration of 1.5% and the average resistance is 15,69 mm.

Keywords : Carbopol 940, *Muntingia calabura* L, hand wash gel, *Staphylococcus aureus*.