ABSTRAK

WULAN SOKA MANISA, 2022, FORMULASI DAN UJI AKTIVITAS ANTIBAKTERI GEL *FACIAL WASH* EKSTRAK DAUN BELIMBING WULUH (*Averrhoa bilimbi* L.) TERHADAP *Staphylococcus aureus*, PROPOSAL SKRIPSI, PROGRAM STUDI S1 FARMASI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh Dr. apt. Titik Sunarni, M. Si. dan apt. Dewi Ekowati, M.Sc.

Masalah kulit yang sering timbul adalah jerawat. Bakteri penyebab jerawat salah satunya adalah *Staphylococcus aureus.* Tanaman yang diketahui memiliki aktivitas antibakteri terhadap *S. aureus* adalah Daun belimbing wuluh (*Averrhoa bilimbi* L.). Daun belimbing wuluh diekstraksi diformulasikan dalam sediaan gel *facial wash* dengan variasi konsentrasi ekstrak daun belimbing wuluh. Penelitian ini bertujuan untuk mengetahui konsentrasi ekstrak yang memiliki mutu fisik, stabilitas serta mampu menghambat bakteri *Staphylococcus aureus* secara efektif.

Daun belimbing wuluh diekstraksi dengan metode maserasi menggunakan etanol 96% dibuat sediaan gel *facial wash* dengan variasi konsentrasi ekstrak 5%, 7% dan 9%. Sediaan gel *facial wash* diuji organoleptis, pH, daya busa, homogenitas, viskositas dan dilanjutkan uji aktivitas antibakteri dengan metode cakram disk. Hasil data yang diperoleh dilanjutkan dengan uji analisis statistik menggunakan SPSS dengan uji *One Way Anova.*

Berdasarkan hasil penelitian sediaan gel *facial wash* ekstrak daun belimbing wuluh sebagai bahan aktif antibakteri gel *facial wash* diperoleh F0, F1, F2 dan F3 memiliki mutu fisik dan stabilitas yang baik. Dari hasil daya hambat bakteri *S. aureus* pada F0 memiliki lebar daya hambat 7,25 mm, F1 sebesar 11,41 mm, F2 sebesar 15,75 mm dan F3 sebesar 18,16 mm. Dari hasil penelitian diketahui penambahan konsentrasi ekstrak berpengaruh terhadap daya hambat bakteri *S. aureus*. Dari semua formula F3 adalah formula yan memiliki muti fisik dan stabilitas yang baik serta mampu menghambat bakteri *S. aureus* paling efektif.

Kata kunci: *Staphylococcus aureus*, *Averrhoa bilimbi* L, gel *facial wash*, antibakteri

ABSTRACT

WULAN SOKA MANISA, 2022, FORMULATION AND ASSESSMENT OF ANTIBACTERIAL ACTIVITY OF FACIAL WASH GEL EXTRACT LEAVES OF WULUH STARS (*Averrhoa bilimbi* L.) AGAINST *Staphylococcus aureus*, PROPOSAL OF THESIS, BACHELOR OF PHARMACY, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY SURAKARTA. Supervised by Dr. apt. Titik Sunarni, M. Si. and apt. Dewi Ekowati, M.Sc.

The most common skin problem is acne. One of the bacteria that causes acne is *Staphylococcus aureus*. Plants that are known to have antibacterial activity against *S. aureus* are starfruit leaves (*Averrhoa bilimbi* L.). The extracted starfruit leaves were formulated in a facial wash gel preparation with variations in the concentration of the starfruit leaf extract. This study aims to determine the concentration of extracts that have physical quality, stability and can effectively inhibit *Staphylococcus aureus*.

Starfruit leaves were extracted by maceration method using 96% ethanol to make facial wash gel preparations with various extract concentrations of 5%, 7%, and 9%. The facial wash gel preparations were tested for organoleptic, pH, foaming power, homogeneity, viscosity and continued with the antibacterial activity test using the good method. The results of the data obtained were continued with statistical analysis tests using SPSS with the One Way Anova test.

Based on the results of the research on facial wash gel preparations of starfruit leaf extract as an active ingredient for antibacterial facial wash gel, it was obtained that F0, F1, F2 and F3 had good physical quality and stability. From the results of the inhibition of S. aureus bacteria, F0 has an inhibitory width of 7.25 mm, F1 is 11.41 mm, F2 is 15.75 mm and F3 is 18.16 mm. From the results of the study, it was known that the addition of the extract concentration had an effect on the inhibition of S. aureus bacteria. Of all the F3 formulas, the formula that has good physical quality and stability and is able to inhibit S. aureus bacteria is the most effective.

Keywords: *Staphylococcus aureus*, *Averrhoa bilimbi* L, facial wash gel, antibacterial.