

## ABSTRAK

### FORMULASI SABUN MANDI CAIR EKSTRAK ETANOL BUNGA KEMBANG TELANG (*Clitoria ternatea L.*) BERBASIS *VIRGIN COCONUT OIL* (VCO) DAN AKTIVITAS ANTIBAKTERI TERHADAP BAKTERI *Staphylococcus aureus*

**Latar Belakang:** Kulit memiliki fungsi utama sebagai pelindung dari berbagai macam gangguan dan rangsangan luar. Dengan fungsi kulit sebagai pelindung maka kulit rentan mengalami infeksi. Salah satu bakteri yang dapat menginfeksi kulit yaitu *Staphylococcus aureus*. Salah satu sediaan farmasi yang digunakan untuk menjaga kulit dari infeksi adalah sabun cair. Bunga kembang telang (*Clitoria ternatea L.*) dapat digunakan sebagai antibakteri terhadap bakteri *Staphylococcus aureus*. Tujuan dari penelitian ini yaitu mengetahui pengaruh variasi konsentrasi bunga kembang telang terhadap sifat fisik dan stabilitas sediaan sabun cair dan mengetahui aktivitas antibakteri sediaan sabun cair bunga kembang telang terhadap *Staphylococcus aureus*.

**Metodologi:** Sediaan sabun mandi cair dibuat dengan konsentrasi ekstrak etanol bunga kembang telang yaitu 5%, 7,5% dan 10%. Hasil uji organoleptis, homogenitas dan uji *freeze-thaw* di analisis secara deskriptif. Data uji pH, viskositas, bobot jenis dan tinggi busa dianalisa secara statistik menggunakan metode ANOVA satu arah (*One Way Anova*) dan Jika data yang diperoleh terdapat perbedaan bermakna maka dilanjutkan dengan uji *Least Significant Differences* (LSD). Hasil uji aktivitas antibakteri dalam bentuk diameter zona hambat dianalisis dengan dibandingkan terhadap kontrol negatif dan kontrol positif.

**Hasil Penelitian:** Hasil penelitian menunjukkan bahwa peningkatan variasi konsentrasi bunga kembang telang dapat meningkatkan viskositas dan bobot jenis, serta menurunkan pH dan tinggi busa. Semua formulasi sabun cair dapat memenuhi kriteria sifat fisik maupun stabilitas. Formula sediaan sabun cair bunga kembang telang pada konsentrasi 5%, 7,5%, dan 10% memiliki aktivitas antibakteri terhadap *Staphylococcus aureus*. Semakin tinggi konsentrasi bunga kembang telang, semakin kuat dalam menghambat pertumbuhan *Staphylococcus aureus*.

**Kesimpulan:** Seluruh formula sabun cair memenuhi persyaratan uji sifat fisik dan stabilitas. Sabun cair yang mengandung ekstrak etanol bunga kembang telang pada konsentrasi 10% memiliki aktivitas antibakteri paling baik terhadap *Staphylococcus aureus* sebesar 12,98 mm dengan kategori kuat.

**Kata Kunci :** Bunga Kembang Telang (*Clitoria ternatea L.*), *Staphylococcus aureus*, Sabun mandi cair, *Virgin Coconut Oil*.

## ABSTRACT

### **FORMULATION OF LIQUID SOAP ETHANOL EXTRACT OF BUTTERFLY PEA (*Clitoria ternatea* L.) BASED ON VIRGIN COCONUT OIL (VCO) AND ANTIBACTERIAL ACTIVITY AGAINST *Staphylococcus aureus***

**Background:** Skin has the main function as a protector from various kinds of disturbances and external stimuli. With the function of the skin as a protector, the skin is susceptible to infection. One of the bacteria that can infect the skin is *Staphylococcus aureus*. One of the pharmaceutical preparations used to protect the skin from infection is liquid soap. Butterfly pea (*Clitoria ternatea* L.) can be used as an antibacterial against *Staphylococcus aureus* bacteria. The purpose of this study was to determine the effect of variations in the concentration of butterfly pea on the physical properties and stability of the liquid soap preparation and to determine the antibacterial activity of the telang flower liquid soap preparation against *Staphylococcus aureus*.

**Methodology:** Liquid bath soap was made with concentrations of ethanol extract of butterfly pea, 5%, 7.5% and 10%. The results of the organoleptic, homogeneity and freeze-thaw tests were analyzed descriptively. The test data for pH, viscosity, specific gravity and foam height were analyzed statistically using the One Way ANOVA method and if there were significant differences in the data, it was continued with the Least Significant Differences (LSD) test. The results of the antibacterial activity test in the form of the diameter of the inhibition zone were analyzed by comparing the negative control and positive control.

**Results:** The results showed that increasing variations in the concentration of butterfly pea could increase viscosity and specific gravity, as well as decrease pH and foam height. All liquid soap formulations can meet the criteria for physical properties and stability. The formula for liquid soap of butterfly pea at concentrations of 5%, 7.5%, and 10% had antibacterial activity against *Staphylococcus aureus*. The higher the concentration of telang flower, the stronger it is to inhibit the growth of *Staphylococcus aureus*.

**Conclusion:** All liquid soap formulas meet the requirements of professional and physical properties test. Liquid soap containing ethanol extract of flower telang flower at a concentration of 10% has the best antibacterial activity against *Staphylococcus aureus* of 12.98 mm with a strong category.

**Keywords:** Butterfly Pea (*Clitoria ternatea* L.), *Staphylococcus aureus*, Liquid Body Wash, Virgin Coconut Oil.