

**FORMULASI DAN UJI ANTIBAKTERI SABUN CAIR MINYAK
ATSIRI BIJI KELOR (*Moringa oleifera* L.) TERHADAP
Staphylococcus aureus SECARA *IN VITRO***

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ABSTRAK

Biji kelor mengandung senyawa-senyawa aktif yaitu fenolik, flavonoid, saponin, terpenoid, proantosianidin, antioksidan dan minyak atsiri. Minyak atsiri biji kelor memiliki sifat antimikroba khususnya terhadap bakteri. Sabun merupakan pembersih yang dibuat dengan reaksi kimia antara kalium atau natrium dengan asam lemak dari minyak nabati atau lemak hewani. Sabun cair sendiri sangat digemari oleh masyarakat karena bentuknya menarik dan praktis. Tujuan dari penelitian ini yaitu untuk mengetahui formulasi sabun cair, uji sifat fisik dan uji aktivitas antibakteri *Staphylococcus aureus* dengan konsentrasi 0%, 25%, 35% dan 45%. Metode penelitian menggunakan metode eksperimental. Kemudian dilakukan uji kemurnian produk, uji sifat fisik sediaan dan uji antibakteri terhadap bakteri *Staphylococcus aureus* dengan metode difusi. Hasil dari penelitian yang telah dilakukan bahwa formulasi sabun minyak atsiri biji kelor dilakukan 6 uji fisik meliputi uji organoleptis, homogen, viskositas, pH, tinggi busa dan bobot jenis telah memenuhi standar SNI. Kemudian hasil pengujian aktivitas antibakteri sediaan sabun cair dapat menghambat bakteri *Staphylococcus aureus* dengan diameter zona hambat bakteri pada (F1) 15 mm, (F2) 18,5 mm, (F3) 20 mm, (F4) 21,5 mm. Analisis data aktivitas antibakteri dengan *one away* ANOVA memiliki nilai signifikan 0.000 yang artinya data normal dan dilanjutkan dengan analisis LSD untuk melihat perbedaan tiap kelompok. Berdasarkan hasil penelitian menunjukkan bahwa sabun cair minyak atsiri biji kelor memiliki aktivitas antibakteri dengan hasil zona hambat terbaik yaitu pada F4 dengan diameter 21,5 yang masuk dalam kategori sangat kuat.

Kata Kunci : Minyak biji kelor, Sabun, antibakteri *Staphylococcus aureus*

**FORMULATION AND ANTIBACTERIAL TEST OF LIQUID SOAP
ESSENTIAL OIL OF MORINGA SEED (*Moringa oleifera* L.)
AGAINST *Staphylococcus aureus* IN VITRO**

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ABSTRACT

*Moringa seeds contain active compounds, namely phenolics, flavonoids, saponins, terpenoids, proanthocyanidins, antioxidants and essential oils. Moringa seed essential oil has antimicrobial properties especially against bacteria. Soap is a cleanser made by a chemical reaction between potassium or sodium with fatty acids from vegetable oils or animal fats. Liquid soap itself is very popular with the public because of its attractive and practical shape. The purpose of this study was to determine the formulation of liquid soap, test the physical properties and test the antibacterial activity of *Staphylococcus aureus* with concentrations of 0%, 25%, 35% and 45%. The research method uses experimental methods. Then the product purity test, physical properties test and antibacterial test against *Staphylococcus aureus* were carried out by the diffusion method. The results of the research that has been carried out that the formulation of Moringa seed essential oil soap carried out 6 physical tests including organoleptic tests, homogeneity, viscosity, pH, foam height and specific gravity have met SNI standards. Then the results of testing the antibacterial activity of liquid soap preparations can inhibit *Staphylococcus aureus* bacteria with a bacterial inhibition zone diameter of (F1) 15 mm, (F2) 18.5 mm, (F3) 20 mm, (F4) 21.5 mm. Analysis of antibacterial activity data with one way ANOVA had a significant value of 0.000 which means the data was normal and continued with LSD analysis to see the differences between each group. Based on the results of the study, it was shown that liquid soap of Moringa seed essential oil had antibacterial activity with the best inhibition zone at F4 with a diameter of 21.5 which was included in the very strong category.*

Keywords: *Moringa seed oil, soap, antibacterial *Staphylococcus aureus**