

Pengaruh Variasi Kadar SLS (*Sodium Lauryl Sulfate*) dan Jenis Pewangi terhadap Karakteristik Sabun Cair Antibakteri Minyak Biji Nyamplung (*Calophyllum Inophyllum* L)

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ABSTRAK

Minyak biji nyamplung merupakan bahan alam yang berpotensi digunakan sebagai bahan utama dalam pembuatan sabun karena tidak bersaing dengan kebutuhan lain. Penelitian sebelumnya telah melakukan formulasi sabun dari minyak biji nyamplung dengan penambahan ekstrak temu giring sebagai zat antibakteri, namun stabilitas busa dan aroma yang dihasilkan memiliki tingkat kesukaan yang rendah. Oleh karena itu penelitian ini bertujuan untuk mendapatkan formulasi sabun mandi cair antibakteri dengan stabilitas busa dan aroma yang disukai oleh konsumen. Selain itu, penelitian ini dilakukan untuk mengetahui pengaruh variasi kadar SLS dan jenis pewangi terhadap karakteristik sabun cair antibakteri. Dalam penelitian ini variasi kadar SLS yang digunakan yaitu 0,5; 0,75; 1; 1,25; 1,5; 1,75; 2; 2,25% dan jenis pewangi berupa lavender, melati, mawar dan tulip. Sabun hasil formulasi dikarakterisasi dan dilakukan uji hedonik. Hasil uji hedonik yang paling disukai kemudian digunakan untuk uji aktivitas antibakteri terhadap bakteri *S. aureus*. Hasil penelitian menunjukkan bahwa sabun SFS8P4 dengan kadar SLS 2,25% dan pewangi tulip paling disukai oleh panelis. Karakteristik sabun SFS8P4 menunjukkan jumlah asam lemak total 21,48%, asam lemak bebas 1,15%, lemak netral 7,57%, bobot jenis 1,02 g/mL, nilai pH 9,6, dan nilai stabilitas busa sebesar 78%. Hasil uji aktivitas antibakteri diperoleh diameter zona hambat sebesar 15,6 mm yang berarti sabun memiliki aktivitas antibakteri yang kuat.

Kata kunci : sabun, nyamplung, *Sodium Lauryl Sulfate*, pewangi, aktivitas antibakteri

The Effect of Variations in SLS (*Sodium Lauryl Sulfate*) Levels and Types of Fragrance on the Characteristics of Nyamplung Seed Oil Antibacterial Liquid Soap (*Calophyllum Inophyllum* L)

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ABSTRACT

Nyamplung seed oil is a natural ingredient that has the potential to be used as the basic ingredient in soap making because it does not compete with other needs. Previous research has carried out a soap formulation from nyamplung seed oil with the addition of temu giring extract as an antibacterial agent, but the stability of the foam and the resulting aroma has a low level of preference. Therefore, this study aims to obtain an antibacterial liquid bath soap formulation with foam stability and aroma that is preferred by consumers. In addition, this study was conducted to determine the effect of variations in SLS levels and types of fragrances on the characteristics of antibacterial liquid soap. In this study, variations in the SLS levels used were 0.5; 0.75; 1; 1.25; 1.5; 1.75; 2; 2.25% and types of fragrances in the form of lavender, jasmine, roses and tulips. Formulated soap was then characterized and performed a hedonic test. The most loved hedonic test results are then used to test the antibacterial activity against *S. aureus* bacteria. The results showed that SFS8P4 soap with SLS content of 2.25% and tulip fragrance was the most preferred by panelists. The characteristics of the SFS8P4 soap show a total fatty acid amount of 21.48%, 1.15% free fatty acids, 7.57% neutral fat, 1.02 g/mL specific gravity, a pH value of 9.6, and a foam stability value of 78% . The results of the antibacterial activity test showed the inhibition zone diameter was 15.6 mm, which means that the soap has a strong antibacterial activity.

Keyword : soap, nyamplung, *Sodium lauryl sulfate*, fragrance, antibacterial activity