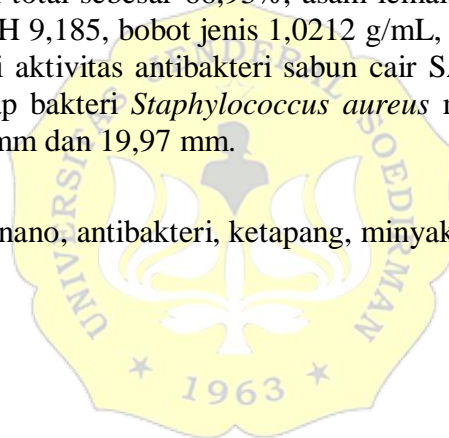


ABSTRAK

Perkembangan kosmetik seiring dengan perkembangan ilmu pengetahuan dan teknologi mulai bergerak ke arah produk alami melalui *trend back to nature*. Minyak biji nyamplung berpotensi menjadi bahan dasar sabun, selain ketersediaannya yang melimpah juga merupakan *non-edible oil* sehingga tidak bersaing dengan kebutuhan pangan. Penelitian sebelumnya telah melakukan formulasi sabun antibakteri dengan bentuk sediaan padat dan cair. Upaya mencapai efek yang optimal, penggunaan sabun cair diperlukan sistem penghantaran yang baik, diantaranya adalah dengan formula nano. Penelitian ini bertujuan untuk mengetahui kadar bahan aktif antibakteri ekstrak metanol daging buah ketapang yang menghasilkan sabun antibakteri dengan karakteristik terbaik sesuai SNI dan mengetahui aktivitas antibakterinya sebelum dan sesudah menjadi formula nano melalui metode sonikasi. Hasil penelitian menunjukkan bahwa sabun cair antibakteri yang memiliki karakteristik terbaik sesuai SNI adalah sabun SA1 dengan kadar ekstrak metanol daging buah ketapang sebesar 1% dengan persentase asam lemak total sebesar 66,93%, asam lemak bebas 2,2533%, lemak netral 3,5356%, nilai pH 9,185, bobot jenis 1,0212 g/mL, dan persentase stabilitas busa 88,50%. Hasil uji aktivitas antibakteri sabun cair SA1 non-nano dan sabun cair SA1 nano terhadap bakteri *Staphylococcus aureus* menunjukkan zona daya hambat sebesar 18,04 mm dan 19,97 mm.

Kata kunci: sabun cair nano, antibakteri, ketapang, minyak biji nyamplung



ABSTRACT

The development of cosmetics along with the development of science and technology began to move towards natural products through the trend back to nature. Nyamplung seed oil has the potential to be used as a base for soap, in addition to its abundant availability it is also a non-edible oil so it does not compete with food needs. Previous research has carried out antibacterial soap formulations in solid and liquid dosage forms. To achieve optimal effects, the use of liquid soap requires a good delivery system, one of which is the nano formula. This study aims to determine the levels of the active antibacterial ingredient of the methanol extract of ketapang fruit flesh which produces antibacterial soap with the best characteristics according to SNI and to determine its antibacterial activity before and after it becomes a nano formula through the sonication method. The results showed that the antibacterial liquid soap that had the best characteristics according to SNI was SA1 soap with the content of methanol extract of ketapang fruit flesh of 1% with a percentage of total fatty acids of 66.93%, free fatty acids 2.2533%, neutral fat 3.5356 %, pH value 9.185, weight of type 1.0212 g/mL, and foam stability percentage 88.50%. The results of the antibacterial activity test of non-nano SA1 liquid soap and SA1 nano liquid soap against *Staphylococcus aureus* bacteria showed zones of inhibition of 18.04 mm and 19.97 mm.

Keywords: nano liquid soap, antibacterial, ketapang, nyamplung seed oil

