ABSTRAK

Sabun antiseptik menjadi salah satu pilihan dalam mengobati penyakit kulit yang disebabkan oleh bakteri, virus, dan jamur. Sabun berfungsi sebagai surfaktan yang melarutkan kotoran serta menjaga kesehatan kulit dan mengurangi infeksi. Penggantian triklosan dengan ekstrak Rosemary sebagai antibakteri alami diharapkan dapat mengurangi risiko alergi dan resistensi. Penelitian ini menguji stabilitas fisika sabun hidrogel ekstrak rosemary melalui uji stabilitas dipercepat *Cycling test*. Aktivitas antibakteri diuji. Sabun hidrogel dengan ekstrak ethanol rosemary pada konsentrasi 4% (F1) menghasilkan zona hambat 6,95 mm, pada 6% (F2) sebesar 5,65 mm, dan pada 8% (F3) sebesar 5,63 mm, semuanya masuk kategori sedang. Hasil uji menunjukkan bahwa kontrol positif menghasilkan zona hambat rata-rata 16,52 mm (kategori kuat), sementara kontrol negatif tidak menunjukkan zona hambat. Kesimpulan penelitian menunjukkan bahwa semua formulasi sabun hidrogel ekstrak rosemary memiliki stabilitas fisik yang baik selama enam siklus (termasuk tinggi busa, rasio swelling, viskositas, dan fraksi gel), meskipun pH sediaan cenderung asam. Aktivitas antibakteri berada pada kategori sedang di semua konsentrasi, dengan konsentrasi 4% menunjukkan efek tertinggi.

Kata kunci: Ekstrak Rosemary, sabun hidrogel, aktivitas antibakteri, triklosan, Stabilitas dipercepat

ABSTRACT

Antiseptic soap is one of the preferred options for treating skin diseases caused by bacteria, viruses, and fungi. Soap functions as a surfactant that dissolves impurities, maintains skin health, and reduces the risk of infection. The substitution of triclosan with rosemary extract as a natural antibacterial agent is expected to minimize the risks of allergy and resistance. This study evaluated the physical stability of hydrogel soap containing rosemary extract through an accelerated stability test (cycling test). Antibacterial activity was also assessed. Hydrogel soap with ethanol extract of rosemary at a concentration of 4% (F1) produced an inhibition zone of 6.95 mm, at 6% (F2) of 5.65 mm, and at 8% (F3) of 5.63 mm, all of which fall into the moderate category. The results further showed that the positive control produced an average inhibition zone of 16.52 mm (strong category), while the negative control did not exhibit any inhibition zone. The findings concluded that all hydrogel soap formulations containing rosemary extract demonstrated good physical stability over six cycles (including foam height, swelling ratio, viscosity, and gel fraction), although the pH of the formulations tended to be acidic. Antibacterial activity remained within the moderate category across all concentrations, with the 4% concentration showing the highest effect.

Keywords: *Rosemary extract, hydrogel soap, antibacterial activity, triclosan, accelerated stability*