

## ABSTRAK

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***OPTIMASI FORMULASI EMULGEL ANTIBAKTERI EKSTRAK ETANOL 70% BUNGA ROSELLA (*Hibiscus sabdariffa* L.) TERHADAP BAKTERI *Staphylococcus epidermidis****

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(XIV + 66 halaman; 28 tabel; 13 gambar; 4 lampiran)

Bunga rosella (*Hibiscus sabdariffa* L.) memiliki kandungan senyawa metabolit sekunder yang dapat dimanfaatkan sebagai antibakteri. *Staphylococcus epidermidis* adalah salah satu bakteri penyebab jerawat, senyawa antibakteri ada pada tanaman ini memiliki potensi untuk dijadikan pengobatan anti jerawat. Penelitian ini bertujuan mengetahui formulasi emulgel antibakteri ekstrak bunga rosella memenuhi stabilitas dan persyaratan mutu fisik serta mengetahui sediaan emulgel ekstrak bunga rosella memiliki aktivitas antibakteri terhadap *Staphylococcus epidermidis*. Metode penelitian yang digunakan adalah metode eksperimental dengan pembuatan emulgel dengan variasi konsentrasi carbopol 940 sebagai *gelling agent*. Evaluasi yang dilakukan pada sediaan emulgel meliputi uji organoleptik, pH, homogenitas, viskositas dan daya sebar, uji stabilitas, uji tipe emulsi dan uji aktivitas antibakteri sediaan emulgel. Aktivitas antibakteri sediaan emulgel menghasilkan zona hambat F1 (20,13 mm;*intermediate*), F2 (20,65 mm;*intermediate*), dan F3 (20,65 mm;*intermediate*). Hasil uji organoleptik, pH, homogenitas, viskositas dan daya sebar, uji stabilitas, uji tipe emulsi menunjukkan formulasi sediaan F1, F2 dan F3 stabil hingga hari keenam. Kesimpulan dari penelitian ini adalah formulasi sediaan F2 lebih baik dari F1 dan F3 berdasarkan kemampuan aktivitas antibakteri, dan lebih stabil pada uji daya sebar dan uji viskositas.

Kata Kunci: Rosella, Antibakteri, Emulgel

Referensi: 53 (1993-2023)

## **ABSTRACT**

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### **OPTIMIZATION OF ANTIBACTERIAL EMULGEL FORMULATION 70% ETHANOL EXTRACT OF ROSELLA FLOWERS (*Hibiscus sabdariffa* L.) AGAINST *Staphylococcus epidermidis* BACTERIA**

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*(XIV + 66 pages; 28 tables; 13 pictures; 4 appendices)*

*Rosella flowers (*Hibiscus sabdariffa* L.) contained secondary metabolite compounds that could be used as antibacterials. *Staphylococcus epidermidis* was one of the bacteria causing acne, and an antibacterial compound present in this plant had the potential to be used as an anti-acne treatment. The study aimed to determine whether the formulation of antibacterial emulge extracts of rosella flowers met stability and physical quality requirements, as well as to find out whether the preparation of emulges of rosella flower extract had antibacterial activity against *Staphylococcus epidermidis*. The research method used was an experimental method involving the formulation of emulsions with varying concentrations of carbopol 940 as a gelling agent. Evaluations conducted on the emulge preparations included organoleptic tests, pH, homogeneity, viscosity and uniformity, stability tests, emulsion type tests, and antibacterial activity tests of the emulge preparations. The antibacterial activity of the emulge preparations yielded inhibition zones of F1 (20.13 mm; intermediate), F2 (20.65 mm; intermediate), and F3 (20.65 mm; intermediate). Results from organoleptic tests, pH, homogeneity, viscosity and resistance, stability tests, and emulsion type tests indicated that formulations F1, F2, and F3 were stable up to the sixth day. The study concluded that the formulation of F2 was superior to F1 and F3 based on its antibacterial activity and stability in one-bar strength and viscosity tests.*

*Keywords: Rosella, Antibacterial, Emulgel*

*References: 53 (1993-2023)*