

ABSTRAK

KHOIRUNNISA'., 2025, FORMULASI DAN EVALUASI MUTU FISIK *CLAY MASK* EKSTRAK BUNGA KAMBOJA MERAH (*Plumeria rubra* L.) SEBAGAI ANTIBAKTERI TERHADAP *Staphylococcus aureus* ATCC 25923, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Bunga kamboja merah (*Plumeria rubra* L.) mengandung senyawa alkaloid, flavonoid, saponin, dan tanin yang memiliki potensi sebagai antibakteri terhadap *Staphylococcus aureus* ATCC 25923, salah satu bakteri penyebab jerawat. *Clay mask* merupakan salah satu bentuk sediaan kosmetik yang digemari, dengan kaolin sebagai basis karena memiliki pH yang sesuai dan sifat cepat kering. Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan basis kaolin terhadap mutu fisik dan aktivitas antibakteri *clay mask* ekstrak bunga kamboja merah.

Ekstrak bunga kamboja diperoleh melalui metode maserasi menggunakan etanol 70%, lalu diuji aktivitas antibakterinya pada konsentrasi 3%, 6%, dan 9%. Daya hambat masing-masing sebesar 9,7 mm, 14,50 mm, dan 16,33 mm terhadap *S. aureus* ATCC 25923. *Clay mask* diformulasikan dengan variasi kaolin 25%, 30%, dan 35% serta ekstrak etanol 6%. Uji dilakukan terhadap mutu fisik, stabilitas (cycling test), dan aktivitas antibakteri, dibandingkan dengan kontrol positif klindamisin.

Hasil menunjukkan ketiga formula memiliki daya hambat berturut-turut 13,33 mm (F1), 12,00 mm (F2), dan 10,16 mm (F3), dengan kontrol positif sebesar 24,33 mm. Ketiga formula dikategorikan memiliki aktivitas antibakteri kuat, sedangkan klindamisin sangat kuat. Formula terbaik berdasarkan mutu fisik, stabilitas, dan aktivitas antibakteri adalah Formula 1.

Kata Kunci : ekstrak bunga kamboja, *clay mask*, antibakteri, *Staphylococcus aureus* ATCC 25923

ABSTRACT

KHOIRUNNISA', 2025, FORMULATION AND EVALUATION OF PHYSICAL QUALITY *OF CLAY MASK* OF RED FRANGIPANI FLOWER EXTRACT (*Plumeria rubra* L.) AS AN ANTIBACTERIAL AGAINST *Staphylococcus aureus* ATCC 25923, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Red frangipani flower (*Plumeria rubra* L.) contains alkaloid compounds, flavonoids, saponins, and tannins that have the potential to be antibacterial against *Staphylococcus aureus* ATCC 25923, one of the bacteria that causes acne. *Clay mask* is one of the most popular forms of cosmetic preparations, with kaolin as a base because it has the right pH and quick-drying properties. This study aims to determine the effect of the use of kaolin base on the physical quality and antibacterial activity of *clay mask* of red frangipani flower extract.

Frangipani flower extract was obtained through maceration method using 70% ethanol, then tested for antibacterial activity at concentrations of 3%, 6%, and 9%. The resistance was 9.7 mm, 14.50 mm, and 16.33 mm respectively against *S. aureus* ATCC 25923. *Clay masks* are formulated with 25%, 30%, and 35% kaolin variations and 6% ethanol extract. Tests were conducted on physical quality, stability (cycling test), and antibacterial activity, compared to positive controls for clindamycin.

The results showed that the three formulas had a drag of 13.33 mm (F1), 12.00 mm (F2), and 10.16 mm (F3), respectively, with a positive control of 24.33 mm. All three formulas are categorized as having strong antibacterial activity, while clindamycin is very potent. The best formula based on physical quality, stability, and antibacterial activity is Formula 1.

Keywords: frangipani flower extract, *clay mask*, antibacterial, *Staphylococcus aureus* ATCC 25923