

**FORMULASI DAN EVALUASI SEDIAAN *CLAY MASK*
EKSTRAK ETANOL DAUN KAKAO (*Theobroma cacao* L.) SERTA
UJI AKTIVITAS TERHADAP BAKTERI *Propionibacterium acnes* ATCC
11827**

ABSTRAK

Acne vulgaris merupakan masalah kulit yang umum terjadi akibat inflamasi kronis pada unit pilosebacea, dengan *Propionibacterium acnes* sebagai salah satu penyebab utama. Resistensi akibat penggunaan antibiotik jangka panjang mendorong pencarian alternatif terapi berbahan alam. Daun kakao (*Theobroma cacao* L.) diketahui mengandung flavonoid, alkaloid, saponin, fenolik, dan tanin yang berpotensi sebagai antibakteri. Penelitian ini bertujuan memformulasikan ekstrak etanol daun kakao dalam bentuk *clay mask* serta mengevaluasi aktivitas antibakterinya terhadap *P. acnes* ATCC 11827. Ekstrak diperoleh melalui metode maserasi menggunakan pelarut etanol 96%, kemudian diformulasikan dalam dua formula: F0 (tanpa ekstrak) dan F1 (30% ekstrak). Uji fisik meliputi organoleptis, homogenitas, pH, daya sebar, viskositas, waktu kering, dan stabilitas dengan metode *cycling test*. Aktivitas antibakteri diuji menggunakan metode difusi sumuran. Hasil penelitian menunjukkan rendemen ekstrak 11,2% dengan kandungan metabolit sekunder utama berupa flavonoid, fenolik, saponin, alkaloid, dan steroid. Formula F1 menunjukkan pH 5,7; daya sebar 6,3 cm; viskositas 21.500 cps; waktu kering 13 menit; dan stabilitas baik setelah tiga siklus penyimpanan. Aktivitas antibakteri F1 tergolong kuat dengan diameter zona hambat 14,27 mm, sedangkan F0 tidak menunjukkan aktivitas hambat. Hasil ini membuktikan bahwa ekstrak etanol daun kakao dapat diformulasikan menjadi *clay mask* yang stabil secara fisik dan efektif menghambat pertumbuhan *P. acnes*, sehingga berpotensi menjadi produk perawatan kulit alami untuk penderita jerawat.

Kata kunci: *Theobroma cacao* L., *clay mask*, antibakteri, *Propionibacterium acnes*, formulasi.

**FORMULATION AND EVALUATION OF CLAY MASK
CONTAINING COCOA LEAF (*Theobroma cacao L.*) ETHANOL
EXTRACT AND ITS ANTIBACTERIAL ACTIVITY AGAINST
Propionibacterium acnes ATCC 11827**

ABSTRACT

Acne vulgaris is a common skin disorder caused by chronic inflammation of the pilosebaceous unit, with *Propionibacterium acnes* being one of the main etiological agents. The emergence of resistance due to prolonged antibiotic use has prompted the search for alternative therapies derived from natural sources. Cocoa leaves (*Theobroma cacao L.*) are known to contain flavonoids, alkaloids, saponins, phenolics, and tannins, which possess antibacterial potential. This study aimed to formulate cocoa leaf ethanol extract into a clay mask and evaluate its antibacterial activity against *P. acnes* ATCC 11827. The extract was obtained by maceration using 96% ethanol, then formulated into two formulas: F0 (without extract) and F1 (30% extract). Physical evaluations included organoleptic properties, homogeneity, pH, spreadability, viscosity, drying time, and stability using the cycling test method. Antibacterial activity was assessed using the well diffusion method. The results showed an extract yield of 11.2% with secondary metabolites including flavonoids, phenolics, saponins, alkaloids, and steroids. Formula F1 exhibited a pH of 5.7, spreadability of 6.3 cm, viscosity of 21,500 cps, drying time of 13 minutes, and good stability after three storage cycles. Antibacterial testing revealed that F1 demonstrated strong activity with an inhibition zone diameter of 14.27 mm, while F0 showed no inhibitory effect. These findings indicate that cocoa leaf ethanol extract can be successfully formulated into a physically stable clay mask with strong antibacterial activity against *P. acnes*, making it a promising natural skin care product for acne treatment.

Keywords: *Theobroma cacao L.*, clay mask, antibacterial, *Propionibacterium acnes*, formulation.