

ABSTRAK
**FORMULASI GEL EKSTRAK METANOL TERPURIFIKASI TANAMAN
API-API (*Avicennia marina*) DENGAN GELLING AGENT CMC**

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Latar Belakang: Daun Api-api (*Avicennia marina*) mengandung senyawa metabolit sekunder seperti flavonoid, tanin, saponin, terpenoid, dan alkaloid yang dapat berperan dalam proses penyembuhan luka bakar. Penelitian ini bertujuan untuk mengetahui pengaruh variasi konsentrasi *gelling agent* CMC dari sediaan gel ekstrak metanol terpurifikasi daun Api-api terhadap sifat fisik dan stabilitas gel untuk luka bakar.

Metodologi: Penelitian eksperimental yang meliputi ekstraksi dan purifikasi daun api-api, formulasi sediaan gel, evaluasi sifat fisik dan stabilitas gel. Gel ekstrak metanol terpurifikasi daun api-api dibuat dengan variasi konsentrasi CMC 2%; 3%; 4%, dan 5%. Gel dievaluasi sifat fisik dan stabilitas selama 28 hari. Hasil data evaluasi fisik dan sediaan gel dianalisis menggunakan *Graphpad Prism*.

Hasil Penelitian: Variasi konsentrasi CMC pada sediaan gel ekstrak metanol terpurifikasi daun api-api dapat menaikkan viskositas dan daya lekat, menurunkan daya sebar, dan stabil pada stabilitas *freeze-thaw*. Hal tersebut dikarenakan adanya propileneglikol sebagai humektant dalam sediaan yang mudah mengikat air dari udara dan meningkatkan volume air pada gel.

Kesimpulan: Gel ekstrak metanol terpurifikasi daun api-api yang memenuhi persyaratan sifat fisik dan stabilitas gel yaitu Formula IV dengan konsentrasi CMC 5%.

Kata kunci: *Avicennia marina*, *Gelling agent*, CMC, Gel

ABSTRACT
FORMULATION OF PURIFIED METHANOL EXTRACT GEL FOR
FIRE PLANT (*Avicennia marina*) WITH GELLING AGENT CMC

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Background: Api-api (*Avicennia marina*) leaves contain secondary metabolites such as flavonoid, tannin, saponin, terpenoid, and alkaloid play a role in the healing process of burns. This study was aimed to determine the effect of variations of gelling agent CMC concentration on physical properties and the stability of Api-api leaves methanol extract purified gel.

Methods: This study is experimental researches includes extraction and purification of Api-api leaves, formulation of gel preparations, and evaluation of physical properties and gel stability. The gels were prepared with a variation of CMC concentration of 2%, 3%, 4%, and 5%. Each gel was evaluated for physical properties and the stability for 28 days. The results of the physical evaluation and gel preparations were analyzed using Graphpad Prism.

Results: Variations in CMC concentration in Api-api leaves purified methanol extract gel can increase viscosity and adhesion, decrease dispersion, and stable in freeze-thaw stability. This is due to the presence of propylene glycol as a humectant which easily binds water from the air and increases the volume of water in the gel.

Conclusion: Api-api leaves purified methanol extract gel that meets the requirement is Formula IV with 5% CMC concentration.

Keywords: *Avicennia marina*, Gelling agent, CMC, Gel