

## ABSTRAK

### **WINDI TRI NURNAWATI, 2025. EFEKTIVITAS SEDIAAN KRIM EKSTRAK DAUN BELIMBING WULUH (*Averrhoa bilimbi* L.) TERHADAP PENYEMBUHAN LUKA SAYAT PADA KELINCI (*Oryctolagus cuniculus*)**

Luka sayat memiliki risiko tinggi terhadap infeksi sehingga memerlukan penanganan yang efektif. Daun belimbing wuluh diketahui mengandung senyawa bioaktif seperti flavonoid, saponin, dan tanin yang berpotensi mendukung proses penyembuhan luka. Penelitian ini bertujuan untuk memformulasikan ekstrak daun belimbing wuluh ke dalam sediaan krim yang memenuhi persyaratan mutu fisik dan stabilitas, serta menguji efektivitasnya terhadap penyembuhan luka sayat. Ekstrak diperoleh melalui maserasi dan diformulasikan menjadi krim dengan variasi asam stearat (5%, 10%, 15%) dan trietanolamin (2%, 3%, 4%). Evaluasi mutu fisik meliputi organoleptis, homogenitas, daya sebar, daya lekat, pH, viskositas, dan stabilitas melalui cycling test. Uji efektivitas dilakukan pada lima kelompok perlakuan dengan parameter penurunan panjang luka dan waktu penyembuhan, kemudian dianalisis secara statistik menggunakan *One Way ANOVA*, *uji Tukey*, dan *Paired Test*.

Hasil menunjukkan tidak semua formula memenuhi persyaratan mutu fisik dan stabilitas. Formula 5 merupakan formula paling baik dari aspek mutu fisik dan stabilitas, meskipun memerlukan optimasi stabilitas viskositas. Sementara itu, formula 6 memberikan efektivitas penyembuhan luka sayat paling baik dengan pH yang memenuhi rentang persyaratan. Sebagai kesimpulan akhir, formula 6 ditetapkan sebagai formula paling baik karena memberikan efektivitas penyembuhan luka paling optimal yang didukung oleh mutu fisik dan stabilitas sesuai standar sediaan topikal.

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**Kata kunci:** daun belimbing wuluh, krim, luka sayat, penyembuhan luka, asam stearat, trietanolamin

## **ABSTRACT**

### **WINDI TRI NURNAWATI, 2025. THE EFFECTIVENESS OF BELIMBING WULUH LEAF EXTRACT CREAM (*Averrhoa bilimbi* L.) ON INCISION WOUND HEALING IN RABBITS (*Oryctolagus cuniculus*)**

Incision wounds carry a high risk of infection, necessitating effective treatment. Bilimbi (*Averrhoa bilimbi* L.) leaves contain bioactive compounds such as flavonoids, saponins, and tannins that potentially support the wound healing process. This study aimed to formulate bilimbi leaf extract into a cream with standardized physical quality and stability, and to evaluate its effectiveness in healing incision wounds.

The extract was obtained through maceration and formulated into creams using variations of stearic acid (5%, 10%, 15%) and triethanolamine (2%, 3%, 4%). Physical quality evaluations included organoleptic, homogeneity, spreadability, adhesion, pH, viscosity, and stability via the cycling test. Healing effectiveness was tested on five treatment groups by measuring wound length reduction and healing time, with data analyzed statistically using One-Way ANOVA, Tukey's test, and Paired Test.

The results indicate that not all formulas met the required standards for physical quality and stability. Formula 5 demonstrated the best performance in terms of physical quality and stability, although it requires further optimization regarding viscosity stability. Meanwhile, Formula 6 provided the highest effectiveness in healing incised wounds, with a pH level that falls within the required range. In conclusion, Formula 6 was determined to be the superior formula as it offers the most optimal wound healing effectiveness, supported by physical quality and stability that comply with topical preparation standards.

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**Keywords :** belimbing wuluh leaf, cream, incision wound, wound healing, stearic acid, triethanolamine