

ABSTRAK

Luka sayat terjadi akibat robekan pada kulit, sehingga memerlukan penanganan untuk mencegah infeksi. Plester luka umumnya menimbulkan rasa perih saat dilepas, sehingga dikembangkan plester *film* bersifat *biodegradable*, lebih elastis, dan tidak iritatif. Lidah Mertua (*Sansevieria trifasciata* Prain) mengandung senyawa bioaktif salah satunya flavonoid, khususnya asam galat yang berpotensi mempercepat penyembuhan luka. Penelitian ini bertujuan untuk memformulasikan plester *film* fraksi etil asetat lidah mertua dan menguji efektivitasnya untuk penyembuhan luka sayat. Metode penelitian laboratorium eksperimental, plester *film* dibuat dengan konsentrasi F0(0%), F1(6,25%), F2(12,5%), dan F3(25%), dilanjutkan evaluasi fisik dan uji *in vivo* selama 16 hari untuk uji efektivitas penyembuhan luka. Hasil penelitian menunjukkan, organoleptik plester *film* berwarna bening hingga hijau kehitaman, bau khas fraksi, bentuk *film*, dan tekstur halus, lentur. Keseragaman bobot disetiap formula berbeda, tetapi memenuhi standar deviasi yang baik $< 0,05$. Ketebalan plester *film* semua formula memenuhi syarat karena < 1 mm. Kuat tarik dan perpanjangan putus seluruh formula memenuhi standar kuat tarik > 1 MPa dan perpanjangan putus 10%. Daya serap kelembapan dan *swelling* setiap formula menunjukkan penurunan dari F0 ke F3, namun masih dikatakan baik karena memenuhi standar daya serap kelembapan $< 10\%$, dan *swelling* antara 200-500%. *Degradability* terhadap TCA 20% dan tripsin menunjukkan bahwa seluruh formulasi plester *film* mengalami degradasi. FTIR mendeteksi gugus asam galat pada $\lambda 3430,19-3453,89$. Uji *in vivo* menunjukkan seluruh formula efektif untuk penyembuhan luka dengan F3(25%) paling optimal. Kesimpulan, plester *film* fraksi etil asetat lidah mertua efektif untuk penyembuhan luka sayat.

Kata Kunci : Fraksi Etil Asetat Lidah Mertua, *In Vivo*, Luka Sayat, Plester *Film*

ABSTRACT

Incision wounds occur due to tears in the skin, so they require treatment to prevent infection. Wound plaster generally causes a painful feeling when removed, so film plaster was developed that is biodegradable, more elastic, and non-irritating. Mother-in-law's tongue (Sansevieria trifasciata Prain) contains bioactive compounds, one of which is flavonoids, especially gallic acid which has the potential to accelerate wound healing. This study aims to formulate a film plaster of the ethyl acetate fraction of the mother-in-law's tongue and test its effectiveness for the healing of stab wounds. The experimental laboratory research method, film plaster was made with concentrations of F0(0%), F1(6.25%), F2(12.5%), and F3(25%), followed by physical evaluation and in vivo tests for 16 days to test the effectiveness of wound healing. The results of the study showed that the organoleptic of film plaster is clear to blackish-green, with a characteristic smell of fractions, film shape, and a smooth, flexible texture. The uniformity of weights in each formula is different, but it meets the standard of good deviation < 0.05 . The thickness of the film plaster of all formulas is qualified because < 1 mm. The tensile strength and elongation of the whole formula meet the standards of tensile strength > 1 MPa and elongation of 10% break. The moisture absorption and swelling of each formula showed a decrease from F0 to F3, but it was still said to be good because it met the $<$ moisture absorption standard of 10%, and swelling between 200-500%. The degradability of 20% TCA and trypsin indicates that the entire film plaster formulation is degraded. FTIR detects galic acid groups at $\lambda 3430, 19-3453, 89$. In vivo tests showed the entire formula was effective for wound healing with F3(25%) most optimal. Conclusion, the in-law' s tongue ethyl acetate fraction film plaster is effective for healing incision wounds.

Keywords: : Ethyl Acetate Fraction Mother-in-Law's Tongue, In Vivo, Incision Wound, Film Plaster