

ABSTRAK

KINASIH, G A B., 2022. FORMULASI EMULGEL EKSTRAK ETANOL DAUN KECOMBRANG (*Etlingera elatior* (Jack) DENGAN VARIASI HPMC TERHADAP PENYEMBUHAN LUKA SAYAT, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI SURAKARTA, Dibimbing oleh apt. Siti Aisiyah, S.Farm., M.Sc. dan apt. Jamilah Sarimanah, S.Si.,M.Si

Daun kecombrang (*Etlingera elatior* (Jack)) mengandung senyawa flavanoid, saponin serta polifenol yang bermanfaat untuk alternatif pengobatan luka sayat. Sediaan emulgel merupakan bentuk sediaan yang praktis dan mudah digunakan dalam pengobatan penyembuhan luka. Penelitian ini bertujuan untuk mengetahui pengaruh variasi konsentrasi HPMC terhadap mutu fisik dan stabilitas yang baik dalam sediaan emulgel, serta mengetahui waktu yang dibutuhkan untuk penyembuhan luka sayat dalam sediaan emulgel pada kelinci putih *New Zealand*.

Ekstrak etanol daun kecombrang diperoleh dengan metode maserasi dengan etanol 70%. Ekstrak dibuat sediaan emulgel dalam tiga variasi konsentrasi HPMC yaitu 2%, 3% dan 4%. Sediaan emulgel diuji mutu fisik meliputi uji organoleptis, homogenitas, pH, viskositas, daya sebar, daya lekat, uji tipe emulsi serta uji stabilitas. Hasil pengamatan lebar penyembuhan luka sayat dianalisis statistik dengan menggunakan SPSS jika terdistribusi normal ($P\text{-Value} > 0,05$) maka dilanjutkan dengan menggunakan uji ANOVA < jika terdistribusi tidak normal $P\text{-Value} < 0,05$) maka dilanjutkan dengan uji *Kruskal Wallis*.

Uji organoleptik emulgel berbau khas kecombrang, berwarna coklat, dan konsistensi semi padat. Memiliki tipe emulsi M/A. Formula basis dengan HPMC 2% 7,25, HPMC 3% 7,62, dan HPMC 4% 7,62. Viskositas tertinggi pada formula HPMC 4% 250 dPas dan viskositas terendah HPMC 2% yaitu memiliki viskositas 151.00 dPas. Daya lekat 6 Formula diatas memberikan nilai daya lekat yang baik. Daya Sebar ke enam formula menunjukkan HPMC 2% memiliki diameter 10.93 cm. Diameter basis dengan HPMC 3% dan 4% sebesar 8.53 cm dan 6.26 cm. Sediaan emulgel dengan HPMC 4% memiliki kecepatan penyembuhan luka selama 10 hari.

Kata kunci : Kecombrang (*Etlingera elatior* (Jack)), luka sayat, emulgel

ABSTRACT

KINASIH G A B., 2022. FORMULATION EMULGEL ETHANOL EXTRACT OF RED GINGER LEAVES (*Etlingera elatior* (Jack)) FOR SINCE WOUND HEALING WITH HPMC CONCENTRATION, THESIS, FACULTY OF PHARMACY, SETIA BUDI SURAKARTA UNIVERSITY, Guided by apt. Siti Aisiyah, S.Farm., M.Sc. and apt. Jamilah Sarimanah, S.Si.,M.Si.

Red ginger leaves (*Etlingera elatior* (Jack)) contain flavanoid compounds, saponins and polyphenols which are useful for alternative treatment of cuts. Emulgel preparations are a practical and easy-to-use dosage form in the treatment of wound healing. This study aims to determine variations in HPMC concentration on physical and good stability in emulgel preparations, and knowing the time needed for wound healing in emulgel preparations for New Zealand white rabbits.

The ethanol extract of red ginger leaves was obtained by maceration method with 70% ethanol. The extract was made into emulgel preparations in three variations of HPMC concentration, namely 3%, 4% and 5%. Emulgel preparations were tested for physical quality including organoleptic tests, homogeneity, pH, viscosity, spreadability, adhesion, emulsion type test and stability test. The wound healing activity was tested on New Zealand white rabbits. The results of observations of wound healing were statistically analyzed using SPSS if normally distributed ($\text{sig} > 0.05$) then followed by using the ANOVA if not normally distributed ($\text{sig} < 0.05$) then followed by the Kruskal Wallis.

The organoleptic test showed that the emulgel has the typical aroma of torch ginger, brown color, and semi-solid consistency. It has an O/W emulsion type. The base formula with HPMC 2% has a pH of 7.25, HPMC 3% has a pH of 7.62, and HPMC 4% has a pH of 7.62. The highest viscosity is found in the HPMC 4% formula at 250 dPas, and the lowest viscosity is in HPMC 2%, with a viscosity of 151.00 dPas. Adhesiveness tests for all six formulas showed good adhesiveness. The spreadability test for the six formulas indicated that HPMC 2% has a diameter of 10.93 cm, while the base diameter for HPMC 3% and 4% is 8.53 cm and 6.26 cm, respectively. The emulgel formulation with HPMC 4% exhibited accelerated wound healing over 10 days.

Kata kunci : Red Ginger (*Etlingera elatior* (Jack)), wound, emulgel