

ABSTRAK

UJI AKTIVITAS ANTIBAKTERI KRIM FRAKSI AQUADEST BATANG AKAR KUNING (*Fibraurea tinctoria*) PADA EKSUDAT LUKA PASIEN DIABETES

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Luka diabetes merupakan komplikasi serius yang rentan terhadap infeksi bakteri, memerlukan alternatif terapi antimikroba yang efektif. Batang Akar Kuning (*Fibraurea tinctoria*) secara tradisional digunakan dan diketahui mengandung senyawa antibakteri. Penelitian ini bertujuan menganalisis daya hambat krim fraksi aquadest batang Akar Kuning terhadap bakteri dari eksudat luka diabetes dan menentukan konsentrasi optimalnya. Metode penelitian meliputi ekstraksi maserasi batang Akar Kuning dengan etanol 70%, fraksinasi, dan pemilihan fraksi aquadest berdasarkan rendemen (80,17%) serta kandungan fitokimia (alkaloid dan flavonoid terdeteksi KLT). Krim diformulasikan dengan konsentrasi fraksi aquadest 30-60%. Bakteri (*Proteus vulgaris*, *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*) diisolasi dari eksudat luka diabetes. Uji antibakteri menggunakan metode difusi sumuran dengan kontrol positif (*Enbatic*) dan negatif. Hasil menunjukkan krim fraksi aquadest Akar Kuning aktif terhadap semua bakteri uji secara dependen terhadap konsentrasi. Formulasi F6 (60%) menunjukkan aktivitas tertinggi, dengan zona hambat terhadap *S. aureus* ($18,80 \pm 0,94$ mm) sebanding kontrol positif ($p=0,983$). F6 tergolong sensitif terhadap *S. aureus*, *E. coli*, *P. aeruginosa*, dan intermediet terhadap *P. vulgaris*. Disimpulkan bahwa krim fraksi aquadest batang Akar Kuning 60% memiliki aktivitas antibakteri signifikan dan berpotensi untuk terapi infeksi luka diabetes.

Kata Kunci: *Fibraurea tinctoria*, Akar Kuning, Antibakteri, Eksudat Luka Diabetes, Krim Topikal, Zona Hambat, *Staphylococcus aureus*

ABSTRACT

ANTIBACTERIAL ACTIVITY TEST OF YELLOW ROOT (*Fibraurea tinctoria*) STEM AQUADEST FRACTION CREAM ON DIABETIC PATIENT WOUND EXUDATE

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Diabetic wounds are serious complications susceptible to bacterial infections, necessitating effective alternative antimicrobial therapies. Yellow Root (*Fibraurea tinctoria*) stem is traditionally used and known to contain antibacterial compounds. This study aimed to analyze the inhibitory activity of Yellow Root stem water fraction cream against bacteria from diabetic wound exudate and determine its optimal concentration. The research method involved maceration extraction of Yellow Root stem with 70% ethanol, fractionation, and selection of the water fraction based on yield (80.17%) and phytochemical content (alkaloids and flavonoids detected by TLC). The cream was formulated with water fraction concentrations of 30-60%. Bacteria (*Proteus vulgaris*, *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*) were isolated from diabetic wound exudate. The antibacterial test used the well diffusion method with positive (*Enbatic*) and negative controls. Results showed that Yellow Root water fraction cream was active against all tested bacteria in a concentration-dependent manner. Formulation F6 (60%) exhibited the highest activity, with an inhibition zone against *S. aureus* (18.80 ± 0.94 mm) comparable to the positive control ($p=0.983$). F6 was classified as sensitive against *S. aureus*, *E. coli*, *P. aeruginosa*, and intermediate against *P. vulgaris*. It was concluded that 60% Yellow Root stem water fraction cream has significant antibacterial activity and potential for treating diabetic wound infections.

Keywords: *Fibraurea tinctoria*, Yellow Root, Antibacterial, Diabetic Wound Exudate, Topical Cream, Inhibition Zone, *Staphylococcus aureus*