THE EFFECT OF KATUK (*Sauropus androgynus*) LEAVES EXTRACT GEL ON THE NUMBER OF FIBROBLAST, FIBROCYTE, AND COLLAGEN DENSITY ON BURN WOUND HEALING IN RATS (*Rattus norvegicus*)

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ABSTRACT

The aims of this study were to determine the effect of katuk (*Sauropus androgynus*) leaves extract gel on the number of fibroblast, fibrocyte, and collagen density on burn wound healing in rats (*Rattus norvegicus*). Fifty male rats were randomly divided into five groups. Negative control (C-) group was normal skin, positive control (C+) group was skin burn treated with placebo, T1 was skin burn treated with 2,5% katuk leaves extract gel, T2 was skin burn treated with 5% katuk leaves extract gel, and T3 was skin burn treated with 10% katuk leaves extract gel. The amount of 25 rat skin samples were collected in 8th day and the remain samples were collected in 15th day. The results were analyzed with Two Way ANOVA, One Way ANOVA, and Kruskal-Wallis. The results showed that 10% katuk leaves extract gel heal much faster as indicated by increased number of fibroblast, fibrocyte, and collagen density, because katuk leaves extract have anti-inflammatory, antioxidant, and antibacterial effects during burn wound healing process. Vitamin A and vitamin C in katuk leaves extract also increased fibroblast proliferation and collagen synthesis on burn wound healing. This study can be concluded that 10% katuk leaves extract gel is the effective dosage to increase the number of fibroblast, fibrocyte, and collagen density on burn wound healing.

Keywords: *Sauropus androgynus*, fibroblast, fibrocyte, collagen density, burn wound healing