

## ABSTRAK

**INDRI SAFITRI, 2022, UJI EFEKTIVITAS GEL EKSTRAK DAUN INSULIN (*Tithonia diversifolia* Gray) SEBAGAI PENYEMBUH LUKA BAKAR PADA PUNGGUNG KELINCI *New Zealand*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh Dr. apt. Gunawan Pamuji W., M.Si dan Apt. Endang Sri Rejeki, M.Si**

Suatu kondisi yang dikenal sebagai luka bakar terjadi ketika kulit terkena sumber panas, luka bakar dapat membahayakan epidermis kulit serta jaringan yang memicu respons inflamasi yang dapat memiliki dampak patofisiologi sistemik dan local. Insulin (*Tithonia diversifolia* Gray) termasuk tanaman yang mengandung flavonoid, saponin, dan tannin. Saponin mampu mendukung proses epitelisasi dan merangsang pembentukan sel epitel baru yang dapat memperkecil diameter luka. Tujuan penelitian adalah untuk memastikan apakah gel ekstrak daun insulin berhasil menyembuhkan luka bakar derajat II pada punggung kelinci *New Zealand* dan untuk memastikan apakah kualitas dan stabilitas fisik gel yang memuaskan.

Metode pembuatan luka bakar derajat II dangkal menggunakan metode Akhoondinasab. Proses maserasi dilanjutkan dengan remaserasi digunakan untuk membuat ekstrak daun insulin. Pembuatan gel ekstrak daun insulin dibagi dalam 3 konsentrasi dengan variasi basis karbopol. Gel daun insulin diuji aktivitas penyembuhan luka bakar dan kualitas fisiknya meliputi organoleptic, daya sebar, pH, homogenitas dan viskositas. *Two way Anova* digunakan untuk memeriksa persentase temuan kesembuhan menggunakan statistic parametrik ANOVA (*Analysis of Variance*).

Hasil yang didapatkan pada penelitian yaitu formulasi gel ekstrak daun insulin dengan variasi konsentrasi zat tambahan karbopol 3% pada formula 1 memiliki aktivitas penyembuh luka yang paling efektif dibandingkan formula lainnya.

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***Kata kunci* : Luka bakar, daun insulin (*Tithonia diversifolia* Gray), gel, kelinci *New Zealand***

## ABSTRACT

**INDRI SAFITRI, 2022, TEST OF THE EFFECTIVENESS OF MEXICAN SUNFLOWERS LEAF EXTRACT GEL (*Tithonia diversifolia* Gray) AS A BURN HEALER IN RABBITS NEW ZEALAND, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA. Guided by Dr. Apt. Gunawan Pamuji W., M. Si and Apt. Endang Sri Rejeki, M.Si.**

A condition known as burns occurs when the skin is exposed to a heat source, burns can harm the skin epidermis as well as tissues triggering an inflammatory response that can have systemic and local pathophysiological effects. Mexican Sunflower (*Tithonia diversifolia* Gray) includes plants containing flavonoids, saponins, and tannins. Saponins are also able to support the epithelialization process and stimulate the formation of new epithelial cells that can reduce the diameter of the wound. The aim of the study was to determine whether the Mexican sunflower leaf extract gel was successful in curing second degree burns on the backs of New Zealand rabbits and to determine whether the quality and physical stability of the gel were satisfactory.

The method of making shallow second-degree burns uses the Akhoondinasab method. The maceration process is followed by re-maceration which is used to make Mexican sunflower leaf extract. The manufacture of Mexican sunflower leaf extract gel was divided into 3 concentrations with the basic variation of carbopol. The insulin leaf gel was tested for its burn healing activity and its physical qualities including organoleptic, dispersibility, pH, homogeneity and viscosity. Two way Anova is used to check the percentage of findings using parametric statistics ANOVA (Analysis of Variance)

The results obtained in the study were that the insulin leaf extract gel formulation with a variation of the concentration of 3% carbopol additive in formula 1 had the most effective wound healing activity compared to other formulas.

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**Keywords:** *Burns, Mexican sunflower leaf (Tithonia diversifolia Gray), New Zealand rabbits, gel*