

INTISARI

Salah satu tumbuhan obat yang digunakan sebagai obat tradisional adalah kayu putih (*Melaleuca leucadendra* L.). Kayu putih mengandung sineol 50 - 65%, α - pinen, limonene dan dipenten. Kegunaannya sebagai obat sakit perut, luka atau koreng, obat luar digigit serangga dan desinfektan.

Penelitian ini merupakan penelitian yang bersifat eksploratif dengan menggunakan rancangan metode *Simplex Lattice Design*, yang bertujuan untuk mengetahui profil sifat fisis salep dan potensi pelepasan minyak atsiri kayu putih dari basis salep yang berpengaruh pada diameter zona hambatan pertumbuhan *Trichophyton mentagrophytes*, serta mengetahui perbandingan komposisi basis PEG 1000- Adeps Lanae yang optimal. Salep minyak atsiri kayu putih dibuat dengan menggunakan campuran basis PEG 1000- Adeps Lanae dengan perbandingan komposisi 100%A-0%B, 75%A-25%B, 50%A-50%B, 25%A-75%B, dan 0%A-100%B (A= PEG 1000, B= Adeps Lanae).

Salep diuji sifat fisisnya meliputi homogenitas, daya lekat, daya sebar dan viskositas salep. Potensi pelepasan minyak atsiri dari basis salep diuji menggunakan metode difusi dengan teknik sumuran. Pada penelitian ini digunakan pendekatan *Simplex Lattice Design* untuk mengetahui komposisi optimal basis PEG 1000- Adeps Lanae. Analisis statistik varian uji F dengan taraf kepercayaan 95%.

Profil viskositas salep berbentuk kurva membuka ke bawah, profil daya sebar salep berbentuk garis linier, profil daya lekat salep berbentuk kurva membuka ke atas, dan profil potensi relatif pelepasan minyak atsiri kayu putih dari basis salep berbentuk kurva membuka ke atas. Komposisi basis PEG 1000- Adeps Lanae optimal yang diperoleh adalah 83% PEG 1000 : 17% Adeps Lanae sampai 54% PEG 1000 : 46% Adeps Lanae.

Kata kunci: *Melaleuca leucadendra* L., PEG 1000, Adeps Lanae, *Simplex Lattice Design*, *Trichophyton mentagrophytes*.

ABSTRACT

Eucalyptus (*Melaleuca leucadendra* L.) is one of medicine plants which is used for human natural cures. Eucalyptus oil contains cineol 50 - 65%, α -pinen, limonene and dipenten. Eucalyptus oil is used to relieve stomachaches, injury, mosquito bite, and disinfectant.

This research was an explorative experiment using *Simplex Lattice Design* method, which had purposes were to know the physical profile of the ointment and the potential act of releasing eucalyptus oil from the basic ointment that influence to the growth obstruction zone diameters of *Trichophyton mentagrophytes*, and to know the optimum composition comparison of PEG 1000- Adeps Lanae. Eucalyptus oil ointment was made by using PEG-1000 and Adeps Lanae as the basic ointment. The basic ointment composition comparison were: 100% A – 0% B, 75% A – 25% B, 50% A – 50% B, 25% A – 75% B, dan 0% A – 100% B (A = PEG-1000; B = Adeps Lanae).

The physical characteristics test to the ointment were homogeneity, adhesiveness, spreadability and viscosity. The potency of releasing volatile oil from basic ointment was tested by using diffusion method with “sumuran technique”. The result of these experiments was analyzed by using statistical methods such as F-test with level of trust: 95%.

The profile of viscosity was shape curve open at the bottom, the profile of spread was shape linier, the profile of adhesiveness was shape curve open at the top, and the profile of potency of releasing volatile oil from basic ointment was shape curve open at the top. The optimal basic ointment composition of PEG 1000 – Adeps Lanae was 83% PEG 1000 : 17% Adeps Lanae until 54% PEG 1000 : 46% Adeps Lanae.

Keywords: *Melaleuca leucadendra* L. , PEG 1000, Adeps Lanae, *Simplex Lattice Design*, *Trichophyton mentagrophytes*.