UKI AKTIVITAS ANTIINFLAMASI ASAM p-METOKSISINAMAT (0.34%) SISTEM SOLID LIPID NANOPARTICLES DENGAN BASIS HPC-H

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ABSTRACT

Kencur (Kaempferia galanga) was known as a traditional herb to relieve pains and aches. p-Methoxycinnamic acid was proposed to have an anti-inflammatory activity. Solid lipid nanoparticles (SLN) was greatly investigated recently as a new drug delivery system. SLN had several benefits as a topical drug carrier. The aim of this study was to observe the area under curve (AUC) each formula with different system using the same gel base (HPC-H). Three different system of p-methoxycinnamic acid was made into topical preparation; p-methoxycinnamic acid with propylene glycol (FI), p-methoxycinnamic acid containing cetyl alchohol, tween 80, propylene glycol without been made to solid lipid nanoparticle system (FII), p-methoxycinnamic acid containing the same component thats loaded to solid lipid nanoparticle system (FIII), 1% sodium diclofenac as positive control (K+) and base gel HPC-H as the negative control (K-). All the five formulation were screened for their anti-inflammatory activity using carragenan induced paw edema models respectively. In anti-inflammatory activity, FI, FII and FIII has showed significant inhibition of carrageenan induced rat paw edema compared to control group in which only gel base HPC-H was used. The anti-inflammatory activity of F1 and FIII were comparable with 1.0% sodium diclofenac gel which was used as standard. The result of the present study further confirm that p-methoxycinnamic acid loaded solid lipid nanoparticles (SLN) has no significant differences with methoxycinnamic acid in base gel with area under curve as the parameter study.

Keyword (s): p-Methoxycinnamic acid, Solid lipid nanoparticles, HPC-H, Antiinflamatory