UJI 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 an traditional herb to relieve pains and aches. *p*-Methoxycinnamic acid was proposed to have an anti-inflamatory 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-inflamatory activity using carragenan induced paw edema models respectively. In anti-inflamatory 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-inflamatory activity of FI and FIII were compareable 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 *p*methoxycinnamic
acid in base gel with area under curve as the parameter study.

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