

ABSTRACT

**INFLUENCE OF BARRIER FUNCTION OF STRATUM CORNEUM
TO PENETRATION OF *p*-METHOXYCINNAMIC ACID
THROUGH RAT SKIN MEMBRAN AS A PRE-FORMULATION
STUDY FOR TOPICAL PREPARATION**

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The purpose of this experiment is to know parameter penetration of *p*-methoxycinnamic acid used wistar rat skin. The outcome of this experiment would subsequently be a scientific foundation for formulating a topical preparation of *p*-methoxycinnamic acid which safe, effective and quality. This research will be carried out in two stages those are determination of the value of effectiveness and the penetration testing of *p*-methoxycinnamic acid. This experiment started with test activity which aims to determine effectiveness doses of *p*-methoxycinnamic that equivalent to sodium diklofenak, it was evaluated using carrageenan 1%. The survey of hind paws edema was done in 6 hour. The result of this study showed the effect of anti-inflammatory of *p*-methoxycinnamic acid are 0,632 times from Sodium Diclofenac or equal to $1,994 \times 10^{-6}$ mol/mL.

Doses that have been obtained from test effectiveness used as levels in the test of penetration. The *p*-methoxycinnamic acid penetration test used two kind of of wistar rat skin membrane, the full thickness skin and the skin without stratum corneum layer. From this test there found to be a significant alteration between the full thickness skin and skin without stratum corneum layer.

Keywords : *p*-methoxycinnamic acid, anti-inflammatory drug penetration,