



INTISARI

Losartan adalah senyawa antagonis reseptor angiotensin II yang mempunyai bioavailabilitas oral yang rendah sekitar 25-30%. Pengantaran secara transdermal menjadi salah satu alternatif untuk mengatasi bioavailabilitas yang rendah tersebut. Asam oleat merupakan *enhancer* yang dapat meningkatkan transpor transdermal. Penelitian ini bertujuan mengetahui pengaruh asam oleat sebagai *enhancer* transpor transdermal lotion losartan secara *in vitro* dan *in vivo*.

Penelitian dilakukan melalui uji *in vitro* dan *in vivo* menggunakan tikus jantan galur Wistar. Kadar asam oleat dalam sediaan lotion divariasikan 0%, 2%, 4%, 6%, dan 8%. Penetapan kadar kalium losartan yang tertranspor menggunakan metode HPLC. Profil transport dianalisis dengan metode *lag time* dan metode kompartemen dengan *software WinSAAM*.

Peningkatan kadar asam oleat dalam lotion losartan akan meningkatkan permeasi asam oleat menembus membran. Kadar asam oleat 6% memberikan peningkatan tertinggi kadar losartan yang tertranspor secara *in vivo*.

Kata kunci: losartan, transdermal, asam oleat, *WinSAAM*.



IN VITRO AND IN VIVO TRANSPORT OF LOSARTAN LOTION

ABSTRACT

Losartan is an angiotensin II receptor antagonist compound, has low and variable oral bioavailability (25-30%). Transdermal delivery of losartan could be used to solve this problem. Enhancer, the chemicals which can be used to enhance transdermal transport, is one of the components needed in transdermal dosage form. This research was aimed to explore the potency of oleic acid as enhancer in transdermal transport of losartan.

The research was done with in vitro and in vivo test using male Wistar rat. Oleic acid in losartan lotion was varied 0%, 2%, 4%, 6%, and 8%. Concentrations of potassium losartan transported were determined using HPLC. Diffusion lag time method and compartmental modelling method using WinSAAM software were used to analyse the transport profile.

The results showed that losartan transdermal transport 6% of oleic acid in lotion losartan gave the highest losartan transported *in vivo*.

Keywords: losartan, transdermal, asam oleat, *WinSAAM*