



## Characterization and Safety of *Nothopanaxscutellarium* Ethyl Acetate Fraction Gel Ethosome

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**Abstract :** *Nothopanax scutellarium* is one of plant that has several biological activities such as obstetrics, kidney disease, inflammatory disease, and promotion of hair growth. Ethosomes are the ethanolic phospholipid vesicles which are used mainly for transdermal drug delivery of drugs. Ethosomes have higher penetration rate through skin. It contains soft vesicle, composed of hydroalcoholic or hydroglycolic phospholipid in which concentration of alcohol is relatively high. Ethosomes are a novel carrier for enhanced skin delivery. The aims of this research were to formulate and obtain ethosome which formed by thin layer hydration method and to know the safety of gel ethosome which contain ethyl acetate fraction. Safety test measured by scoring and categorizing within chorioallantoins membran. (HET CAM). The formulation of ethosome that using 20% ethanol and the ratio of phosphatidylcholine and ethyl acetate fraction were 1:2. The characterization from the ethosome suspension indicated that the entrapment efficiency value of 52.79% with particle size distribution value (Z-Average) 110.5 nm, polydispersity index (PdI) 0.393 and zeta potential value -11.0 mV. The result of safety test showed that 0.5% and 1% gel ethosome contain ethyl acetate fraction of scutellarium leaves have mild irritation effect.

**Keywords :** *Nothopanax scutellarium* Merr, ethosome, characterization, HET CAM, safety.

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