

### **Abstract**

Meniran (*Phyllanthus niruri* L.) is known to contain flavonoids which can be used as antioxidants. Using meniran directly is less effective and efficient so it should be made into a gel preparations. Gel preparations gives more advantages than other topical preparations because it is easier to apply and can provide comfort when using. This study aimed to obtain the optimum formula from extracts of gel preparation using a combination of Carbopol and HPMC that had the best physical stability.

Meniran needs to be macerated by using ethanol 70% to become a thick extract, then the thick extract can be gel preparations with variations of carbopol and HPMC based on Software Design Expert version 10. The data obtained from the gel physical properties test was analyzed using the Simplex Lattice Design (SLD) method to get the optimum formula. The results of verification testing compared the significance with the T-test using the 95% confidence level. The Physical stability of the optimum gel preparations from meniran extract (*Phyllanthus niruri* L.) was tested using one way ANOVA.

The results showed that the optimum gel preparations from meniran extract (*Phyllanthus niruri* L.) had Carbopol 1.35% b / b and HPMC 2.15% b / b. Based on the results of the verification test, it was found that the SLD prediction was valid for the response of scatter power test and viscosity test, while the sticky power test response was not as predicted. The optimum gel preparations from meniran extract was less stable in response to the sticky power test during storage.

Keyword : *meniran extract, gel, Carbopol, HPMC*