

ABSTRACT

THE EFFECT OF VARIATION OF CARBOPOL 940 CONCENTRATIONS ON THE PHYSICAL CHARACTERISTICS OF GEL PREPARATIONS FROM HENNA LEAF EXTRACTS (*Impatiens balsamina* Linn) AND

***(Centella asiatica (L.) Urban leaves
(Study conducted at Academy of Pharmaceutical Surabaya)***

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*Allergic skin diseases such as atopic dermatitis or eczema are chronic inflammatory skin diseases caused by an uncontrolled immune response and damage to the skin barrier. The leaves of henna and gotu kola contain flavonoid compounds which can be used as anti-inflammatories. The purpose of this study was to determine the effect of variations in carbopol 940 concentrations on the physical characteristics of gel preparations of henna leaf extract (*Impatiens balsamina* Linn) and gotu kola leaves (*Centella asiatica* (L.) Urban). The method in this study is experimental. In this study extracts of henna leaves (*Impatiens balsamina* Linn) and gotu kola leaves (*Centella asiatica* (L.) Urban) were formulated as topical gels with various carbopol 940 concentrations of 1% and 1.1%. The physical characteristic test of the gel preparation included organoleptic test, homogeneity test, pH test and spreadability test. The data obtained were then processed using SPSS 25. The results of this study indicated that the formula I and formula II fulfilled the 4 parameters of the gel preparation test, namely the organoleptic test, homogeneity test, pH test and spreadability test. Based on the preparation of gel extract of henna leaves (*Impatiens balsamina* Linn) and gotu kola leaves (*Centella asiatica* (L.) Urban) with various concentrations of carbopol 940 had no effect on the organoleptic test and homogeneity test, but had an effect on the pH test and spreadability test. Meanwhile, the higher the concentration of carbopol 940, the more acidic the pH of the preparation. And the higher the concentration of carbopol 940, the lower the dispersion value.*

Keywords: Gel, henna leaves, gotu kola leaves, Carbopol 940, physical characteristics of the preparation