

ABSTRACT

(LITERATURE REVIEW)

THE EFFECT OF PROPYLENGLYCOL CONCENTRATION ON THE CHARACTERISTICS OF THE GEL PREPARATION

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Gel preparations are semi-solid systems consisting of suspensions made of small inorganic particles or large organic molecules, penetrated by a liquid. The preparation in the form of a gel has the ability to spread well on the skin, has a soft and cool effect on the skin caused by the slow evaporation of water on the skin, does not clog skin pores and can penetrate the skin, thus providing a faster therapeutic target (Ansel, 2005).). The flexibility and resistance of a material to dissolve compounds more easily than other thickening agents and are stable at pH 3-6. Propylene glycol is used for the formulation of topical preparations as a thickening agent with a concentration of 15% (Rowe et al, 2009). Emulgel consists of a combination of 2 preparations, namely emulsion and gel preparations. Emulsions are unstable biphasic liquid dosage forms. The preparation consists of two immiscible liquids, one of which is dispersed as droplets into the other phase. Preparations can be stabilized by the addition of a third substance called an emulsifying agent or emulsifier. Emulsions can be in the form of O/W and W/O, emulsion preparations are often used as a means in drug delivery systems (Yin Z, et.al, 2016). Based on the description of the background above, a research was carried out on the effect of the characteristics of Gel and Emulgel preparations in which the concentration of Propylene Glycol was contained. General Purpose To determine the most effective concentration of propylene glycol on the dispersion of Ibuprofen gel, Ketoprofen gel and Aminophyllin gel.

Based on the literature review of these 3 articles, overall it was concluded that the effect of Propylene glycol on the characteristics of the gel preparation on the gel preparation in the third literature, the pH test resulted in a good pH on the aminofillin gel with the addition of Propylene Glycol to produce a pH of 5 in the three formulas.

Key words : Propilenglycol, Ibuprofen, Ketoprofen, Aminophyllin