STUDY OF PIROXICAM GEL STABILITY USING HPMC AND *ACUPEC HV-505* BASES*)

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ABSTRACT

An investigation on piroxicam gel formulation using HPMC base (1.5, 2.5 and 5%) and other formula using Aqupec HV-505 bases (0.5, 1 and 1.5%, respectively, had been carried out to find out the best formula. The stability testing was conducted on organoleptic, pH, viscosity and, consistency for 28 days of storage. The result showed that the formula with 1% Aqupec HV-505 bases (F_{C2}) was the best one. Further investigation was conducted with variation of of Piroxicam concentrations to know it's influence to gel stability. The additional investigation conducted to the best formula were microbiology, qualitative and quantitative stability testing using Thin-Layer Chromatography (TLC) and High Performance Liquid Chromatography (HPLC) for 56 days of storage. The result showed that the best gel formula was that with 1% Aqupec HV-505 with 0,5% piroxicam ($F_{C2.2}$).

Keywords: Piroxicam, Gel, HPMC, *Aqupec* HV 505.

INTRODUCTION

Piroxicam is one of the most potent NonSteroidal Antiinflammatory agents that also have antipyretic activity. Piroxicam is well absorbed following oral administration; however, its used has been limited by a number of side effect, including bleeding and ulceration. Transdermal adnministration of piroxicam can overcome this side effect, and higher local concentration can be maintained at the target site, which is desirable for the antiinflammatory agent (Banakar, 1992; Panchagnula, 1997; Doliwa, 2001). Transdermal drug delivery system has the additional advantages of avoiding hepatic first-pass metabolism (Dallas, 1987).

In light of the side effect assoctiated with the oral use of piroxicam, it was proposed to the developed the various topical dosage forms of the drug and to study its stability. The objective of this study was to develop the best topical gel formulation of

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