



Comparative *In Vitro* Transmucosal Permeation of Three Proprietary Diclofenac Gels

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SUMMARY. Studies to evaluate the clinical efficacy and safety of various topical NSAIDS compared to oral NSAIDS have been reported but little research has been conducted to evaluate the efficacy of topical NSAIDS from different manufacturers containing the same concentration of medicament. The aim of this study was to make comparison of the *in vitro* release rate of three proprietary Diclofenac gels. To study the *in vitro* potential of these formulation permeation studies were performed with Franz diffusion cell by using cellulose acetate membrane. *In vitro* permeation study was found that the diffusion profile of A gel was equivalent to Voveran Emulgel while B gel was significantly ($p < 0.05$) lower than Voveran Emulgel. This data indicates that the simple denotation of Diclofenac sodium 1% w/w gel is inadequate as a means of distinguishing between similar formulations of different manufacturers that might contain the same types of excipients. This highlights the potential problems that may arise from the mistaken assumption that generic prescriptions and formulations are pharmaceutically and clinically equivalent and interchangeable.

KEY WORDS: Diclofenac, Franz diffusion cell, NSAIDS, Permeation.

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