CHAPTER V

CONCLUSION

1. The diffusion of dexamethasone from various topical vehicle was studied using a dialysis cell fitted with a cellulose membrane. The rate of release for preparations containing 0.05% W/W dexamethasone was in the following order, water soluble base > oil-in-water emulsion base > absorption base = oleaginous base

2. The effect of various additives such as water, alcohol, benzalkonium chloride 1 : 10,000 cetyl pyridinium chloride 1 : 1000, on the rate of diffusion of dexamethasone was also investigated. Benzalkonium chloride 1 : 10,000 exhibited the maximun release in these series

3. Increasing the concentration of additives in the vehicle caused a corresponding increase in the amount of dexamethasone dialyzed through a cellulose membrane up to 13%.

In formulation of topical application, such as ointment, the additives have a profound effect on the release of the drug from the vehicle by effecting the solubility and dispersibility.Besides, alcohol has a soothing and preservative effect, while benzalkonium chloride and cetylpyridimium chloride has an anti-infective effect. Therefore it is better to use these additives in combination with the base of choice to increase the rate of drug releasing and therapeutic action.