



## CHAPTER V

### CONCLUSION

Tween 20 is the best emulsifier for this gel system, which appropriate concentration is 1%. While 2% Tween 20 can be used but represent less release.

Span 20 may be used in this system with 0.5% and 1% concentration. However, Span 20 is not the best emulsifier since it illustrates inconsistent release.

Increasing emulsifier concentration will increase solubility of the lipophilic component in gel base, however, increasing emulsifier concentration may not always increase the release of the component from gel formulation. Emulsifier will entrap the component inside the disperse phase, thus when increase emulsifier concentration, condense emulsifier layer between disperse phase and continuous phase will affect the release of the component from disperse phase and cause less release from the formulations. Therefore, selection of emulsifier is important since it can alter the stability and the release of the main ingredient from the formulations. Not only choose the best emulsifier for the system, but concentration of emulsifier should be concerned also. The optimum concentration of emulsifier will be different in each formulation. Experiments should be conducted in order to determine the optimum concentration of emulsifier in each system.