

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

The incorporation of chitin whisker into the pluronic gel resulted in the increasing the weight remaining which led to the improvement of gel stability. Moreover, it is provide the slow release of the model drugs by the interaction between polar functional groups of chitin whiskers and model drugs. The slowest release of model drug is 7% content of chitin whisker in pluronic solution. From the result shows that the cumulative release of MB (cationic dye) higher than MO (anionic dye), because of the attractive forces between chitin whisker and MO molecules and the repulsive forces between chitin whisker and MB molecules. For insulin, the cumulative release is lower than dye system because the functional group and the interaction in insulin more than dye molecules. In conclusion, pluronic/chitin whisker composite gels showed a potential to be used as a carrier for injection drug delivery system for the purpose of prolongation of the drug release and the improvement in the efficiency of the medical therapy.