

CHAPTER V

CONCLUSIONS

The blend films had lower crystallinity than the pure chitin and cellulose films. The equilibrium water contents of the blend films and cellulose film were less than that of chitin film. The films immersed in the solutions of NaCl, LiCl, CaCl₂, AlCl₃, and FeCl₃ had the maximum degree of swelling for the blend films with 60% cellulose content. While the degree of swelling of the films immersed in water decreased as cellulose content increased. Among these salt solutions, the blend film with 60% cellulose content immersed in LiCl solution had the maximum degree of swelling. For all types of salt, the maximum degree of swelling of the blend film with 60% cellulose content were obtained at 0.125 M salt concentration. Pure chitin film and the blend films with high chitin content had higher pH sensitivity than pure cellulose film and the blend films with low chitin content. The degree of swelling of the blend films decreased as pH of the solutions increased. The maximum tensile strength and elongation at break were obtained for the blend films with 80% cellulose content. Oxygen permeability rates of the blend films were less than that of pure chitin and cellulose films. It may say that the blend films have gas barrier property.