



CHAPTER V

CONCLUSIONS

The blend compositions of CM-chitin/silk fibroin blend films had effects on the mechanical properties and swelling behavior of the blend films. Blending silk fibroin with CM-chitin resulted in an improvement in tensile strength and swelling behavior. On the other hand, silk fibroin enhanced the thermal stability of CM-chitin. The addition of cross-linking agent to the blend films enhanced the mechanical properties of the films. Furthermore, cross-linking was very important for the swelling behavior since it enabled retention of structural integrity of the films in water, even though it reduced the degree swelling of the films. The swelling behavior of CM-chitin/silk fibroin blend films varied with respect to changes in pH and salt type. Therefore, these CM-chitin/silk fibroin blend films had pH and salt-responsive properties.