



CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Nano-structured chitosan was successfully prepared by introducing hydrophobic (Phe) and hydrophilic (mPEG-COOH) groups on low molecular weight chitosan chain via the water-soluble conjugated reaction. The compound obtained showed the %DS of Phe and mPEG-COOH ~10% with size ~150-250 nm in the solution state and a spherical shape for ~50 nm in the dry state. The allergen entrapment was about ~20% by UV-Vis spectroscopy and ~ 3% by HPLC.

The recommendations for the related future work are; (i) investigation of the factors related to allergen incorporation such as pH solution, the concentration of loaded allergen, and the concentration of LCS-Phe-mPEG, and (ii) study on the effects of the type of amino acid such as tryptophan, arginine, leucine, etc.