



CHAPTER V

CONCLUSIONS AND SUGGESTIONS

The chitosan-clay nanocomposite was successfully prepared preparation chitosan aerogel with dicarboxylated poly(ethylene glycol) crosslinker and combining with Na^+ -montmorillonite for improve properties of chitosan aerogel. The reaction was successful under room temperature by using WSC as a conjugating agent and adding the clay dispersed in water. The appearances of hydrogels was controlled by varying mole ratio of crosslinker. CD-3 showed the good appearance and the lowest degree of swelling when compared with other gels. In the case of chitosan-clay nanocomposite, clay showed decrease the degree of swelling and improve the thermal properties of gels. The product obtained showed the porous material. The recommendations for the related future works are, (i) study about pH effects on chitosan aerogel and (ii) study about control the pore size of chitosan aerogel.