

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

The purpose of this research fabricated the new type of adsorbent for CO₂ adsorption by improve amine function of arginine on biopolymer. To improve amine group in biopolymer, purified method was used. The purified biopolymer got degree of deacetylation 96.43%. The purified biopolymer was increased amine group by react with arginine which has most amine group in all types of amino acids. Three effects were studied; effect of coupling agents, effect of reaction time, and effect of arginine. The best condition that gave highest degree of substitution was ratio of biopolymer/arginine/coupling agents as 1:1:1 with reaction time 72 h. The most degree of substitution was 76.41 %.

5.2 Recommendations

1. In the characterization of the modified biopolymer, there should be another method to confirm the degree of substitution (%DS) of the modified biopolymer due to CHN elemental analyse method was not gave the suitable degree of substitution range.
2. The other properties of modified biopolymer should be detected such as surface area, pore volume, and etc.
3. For complete work, CO₂ adsorption study should be done including adsorption capacity, and life cycle of adsorbent to determine the probability of CO₂ adsorption.