



CHAPTER V CONCLUSIONS

The chitinase enzyme was prepared from *Staphylococcus species* strain TU005(E). The activity of enzyme was evaluated by turbidimetric assay and colorimetric assay. Colorimetric assay gives the amount of GlcNAc released after enzymatic degradation. Oligochitosan was obtained from chitinase degradation. The obtained oligochitosan showed the viscosity decreased for 38.73%, while the FT-IR, XRD, TGA confirmed the chitosan structure maintained even after chitinase treatment.

Phthaloyl group was introduced onto oligochitosan to protect the amino group. The obtained chitosan performed a homogeneous reaction in tosylation. O-lauryl-N-phthaloyl oligochitosan was prepared successfully in pyridine as confirmed by FT-IR.