

THE EFFECT OF METHOD TO REMOVE MINERAL AND PROTEIN CONTENT ON THE QUALITY OF CHITOSAN PRODUCTION FROM CUTTLEFISH CYSTIC (*Sepia esculenta*)

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Summary

Chitosan production according to the method to minimize chemical amount with purpose to protect environmental and increase the value of by-products was research trend in recently years in Vietnam. In this research, the effect of demineralization and remove the protein content on the quality of chitosan from cuttlefish cystic were investigated. Sample were removed the mineral content by two different method: (i) soaking in HCl 8% for 24 hours and (ii) treating in CH₃COOH 5% for 15 hours then soaking in HCl 6% for 24 hours. After selecting the method to show the best demineralization efficiency, sample were separated two groups to discard the protein content: first group were treated in NaOH 8% and second group were treated with Alcalase enzyme at the concentrations of 0.2% for 15 hours at 50⁰C - 55⁰C C. After removing protein content, two group samples were deacetyl with NaOH at the content of 50% for 48 hours at 65⁰C-70⁰C to show degree of deacetylation was not significantly difference. From the results, it was concluded that the method to demineralization by combining acid acetic and HCl (to reduce HCl from 8% to 6%) and remove the protein by using Alcalase enzyme 0.2% (to reject the NaOH 8% according to chemical method) in cuttlefish cystic was not affected on the quality of chitosan.

Keywords: *Chitosan, cuttlefish cystic, demineralization, remove the protein content.*