Production of chitosan from shrimp shell is one of the most economical and practical processes. However, crushed shrimp shell must be deproteinized, demineralized, and deacetylated before chitosan can be produced.

This research focused on conditions in each step which included process time, temperature, amount of acid or alkaline added, and dilution rate. It was found that increasing processing time from 1 to 3 hours significantly increased the yield in all steps but longer periods did not affect the yield. Optimum temperature was 100 and 120 °C in the first and third steps, respectively. Diluted substrate seemed to have positive effects on production yield, though it significantly increased the treatment volume. Therefore, compromise must be made between yield and production cost. Concentration of NaOH and HCl at 1 N was optimum condition for the first and second steps, while using 30% NaOH showed highest yield in the last step.