

**Pengaruh Jenis dan Konsentrasi Asam terhadap Derajat Deasetilasi
Kitosan dari Limbah *Black Soldier Fly***
(*Effect of Acid Type and Concentration on Chitosan Deacetylation Degree
from Black Soldier Fly Waste*)
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ABSTRACT

Maggots are larvae of the BSF fly type which have potential as raw material for chitosan because they contain chitin. The production of chitin into chitosan goes through the deacetylation stage using a strong base with a high concentration, causing the neutralization process to take a long time and require a lot of distilled water. For time and cost efficiency, acid is used in the neutralization process. The aim of the research was to determine the effect of the type and concentration of acid on the degree of deacetylation of kitosan. Chitosan is made through deproteination, demineralization, depigmentation and deacetylation stages. The deacetylation stage is neutralized with two types of acid, namely acetic acid and hydrochloric acid with a concentration of 1.5%; 3% ; and 6%. The results of the ANOVA test showed that there was a significant difference ($p \leq 0.05$) between the differences in acid concentration on water content, ash content and chitosan yield. However, there was no significant difference ($p \geq 0.05$) in total nitrogen and degree of deacetylation. Independent T-test results showed that different types of acid had no significant effect ($p \geq 0.05$) on water content, ash content, total nitrogen and degree of deacetylation. The ANOVA test of the interaction between the combination of acid type and acid concentration produced the best treated sample, namely 6% hydrochloric acid with a water content of 3.17%, ash content of 3.20%, total nitrogen content of 2.71%, and degree of deacetylation of 71.22. %.

Keywords: chitin, chitosan, degree of deacetylation, black soldier fly.