

Pengaruh Nano kitosan dari Limbah Cangkang Keong Sawah (*Pila ampullacea*) Terhadap Umur Simpan Sayuran Segar (*The effect of nanochitosan from (Pila ampullacea) shelf life on fresh vegetable storage*)

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ABSTRACT

*The shell of the paddy snail (*Pila ampullacea*) can be extracted nanochitosan compounds which have high antimicrobial activity against bacterial cells. Nanochitosan compounds have the potential to maintain the quality of fresh products such as vegetables during the storage process and the main factors causing quality degradation are temperature and storage time. This can be achieved by characterizing chitosan with FTIR, taking characterization with SEM, conducting antimicrobial activity tests (MIC and MBC), and estimating shelf life using the ASLT Arrhenius model method on fresh vegetables. Decreasing quality of fresh vegetables can be evaluated using the Accelerated Shelf Life Test (ASLT) Arrhenius model using variations in storage temperature of 4°C, 28°C, 40°C and storage time by testing total bacteria (*Pseudomonas aeruginosa*) and sensory observations including color, smell and texture. The effect of nanochitosan from rice snail shells (*Pila ampullacea*) on lettuce and leunca vegetables based on the parameters of the total bacteria test and the hedonic test stated that nano-chitosan could extend the shelf life of both vegetables compared to vegetables that were not added with nanochitosan antibacterial.*

Keywords: Nanochitosan, Fresh vegetables, Shelf life