

ABSTRACT

TEST EFFECTIVITY OF GRADUALLY FERMENTATION CHITIN USE *MUCOR MIEHEI* AND *ACTINOMYCETES* ANL-4 FOR MAKING GLUCOSAMINE

By

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Chitin is a biopolymer formed by N-acetylglucosamine monomers binded by - (1,4) glycoside. Chitin is abundant compound normaly founded from seafood waste industry such as : shrimps. Glucosamine was synthezided gradually fermentation technique using *Mucor miehei* and *Actinomyces* ANL-4. The research was carried out into the effectiveness of glucosamine-making by using chitin fermentation gradually utilizing *Mucor miehei* and *Actinomyces* ANL-4. Fermentation chitin were first conducted with the help of *Mucor miehei* which produces glucosamine at 5.5 g after the remaining substrate fermentation phase I continued on the two-stage fermentation is done with the help of *Actinomyces* ANL-4 producing glucosamine of 4.34 g. Total derived glucosamine is 9.84 g or about 98% of the chitin substrate is used as much as 10 g. Based on the IR spectra and HPLC analysis for the two samples (*Mucor miehei* and *Actinomyces* ANL-4) have absorption bands in the range and intensity of the same relative retention times compared to standard, it indicates that the isolated compound is glucosamine.