

ABSTRAC

Munif, Miftachul. 2012. **Viability Test of *Indigenous* Bacteria Water Bath Kenaf (*Hibiscus cannabicus* L.) in Tapioca Media and Long Storage with Freeze Drying Process.** Thesis Department of Biology Faculty of Science and Technology State Islamic University (UIN) Maulana Malik Ibrahim Malang. guidance I: Ir. Lilik Harianie AR, MP guidance II: Nur Farida, S. Si, MP Religion guidance : Ach. Nasihhudin, M.A

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Indigenous bacteria (*Bacillus* and *Paenibacillus*) is degrading fiber bacteria are found free in nature. And it often used to accelerate and increase fiber quality of kenaf. *Indigenous* bacteria worth saved and developed. Tapioca has a high carbohydrate content, so it is possible to be a source of nutrients for the microbes. Freeze drying method is proven to reduce the rate of bacterial metabolism and induce dormancy processes in bacteria with a low mortality rate. This research is to know the viability test of *indigenous* bacteria water bath kenaf (*Hibiscus cannabicus* l.) in tapioca media and long storage with freeze drying process.

The research was conducted in Microbiology Laboratory UIN Malang Maliki for the manufacture of starter and viability. Freeze drying process is conducted at in Biotechnology Laboratory UMM Malang on 27 February to 23 November 2011. Research design is a descriptive qualitative with two factors treatment of tapioca and skim (media I) and Tapioca, Skim and Glucose (media II), it be done in two repetitions. Storage duration treatment with 4 storage factor is 0, 4, 6 and 8 weeks. The data includes the observations of the viability of bacteria indigenous to the method of CFU/ml.

The results are showed that the most viability of bacteria in the media ever tapioca, skim and glucose at 0 weeks storage to achieve $4,36.10^{10}$. and lowest in the media tapioca and skim at 8 weeks storage to achieve on $1,4.10^9$. The highest decrease in viability found in tapioca skim and glucose media at storage phase 4-6 week achieve 83.6%. While the tapioca and skim media storage during the 0-4 week the addition of viability up to 24%. Although the process of manufacture and storage dry cultures is viability lowering but the number of *indigenous* bacteria cell is still quite high.