

ABSTRACT

Shonhaji, Achmad. The effectiveness of explant environment sterilization of *Acacia mangium* Wild in the excessively of it by culture tissue method. Thesis, Biology department, Faculty of Science and Technology, The Maulana Malik Ibrahim State Islamic University of Malang. Biology's supervisor: Ruri Siti Resmisari, M.Si., Religion's supervisor: Andik Wijayanto, M.Si.

Keywords: sterilization of explant environment, *Acacia mangium* Wild, culture tissue technician

The *Acacia mangium* is the species that most people plant, especially in the plant forest of Indonesia (HTI) in Sumatra and Kalimantan islands, this species were fostered for HTI because of the fast growing (it able to use in only in the year of 6-7) this because of the supply of basic material needs from the forest production decreased, while the needs of industrial wood of national wood up surged. The *Acacia mangium* is able to grow in marginal field such as coarse grass; the wood is capable for any industrial needs, (such as the basic needs of pulp paper, MDF (medium density fiber board), particle board, and trade wood. Tissue bud is the technique for increasing the productivity of *Acacia mangium*. A factor that really crucial to be success in tissue bud from the field is explants sterilization technique of the bud of *Acacia mangium*. This research is intended to know the use of the sterilization product of NaOCl and HgCl₂, which is effective in the explants sterilization from the field in *Acacia mangium*.

This research is dealing with the observation method, and the data were collected with the qualitative and quantitative method by the statistic test with ANOVA two-way. Besides, the kind of the combination of the product is NaOCl which is focused in (0,5%; 1%; 2%, and the stage of (2%, 1%, 0,5%)). And the second step is in HgCl₂ which the concentration (0 mg/l; 0,05 mg/l; 0,1 mg/l; 0,15 mg/l, and 0,2 mg/l). The combination of two elements above were combined and examined with the length of the explants soak of *Acacia mangium* during 5 minutes, 7 minutes and 10 minutes.

The result of the discussion showed that the use of the sterilization product of NaOCl and HgCl₂ influenced through the percentage of the level explants of *Acacia mangium*. The utilizing of NaOCl and HgCl₂ that is effective in the field explants sterilization of *Acacia mangium* with NaOCl with the concentration in 0,5%, and HgCl₂ through the concentration in 0,15 mg/l, in the length of the soak of *Acacia mangium* during 10 minutes.