Pramita Putri Reanida, 2012. Exploration of Cellulolytic Degrading Bacteria from Mangrove Soil in Wonorejo Surabaya. This study was written under guided by Drs. Agus Supriyanto M. Kes and Drs. Salamun M. Kes. Biology Departement, Science and Technology Faculty of Airlangga University, Surabaya.

ABSTRACT

This research was aimed to know about the presence of the bacteria that have potential to degrading cellulose from the soil of mangrove area in Wonorejo Surabaya. This study was designed as an exploratory study with descriptive analyze. Soil samples were collected from 4 different rhizosphere’s soil of mangrove namely Avicennia germinans, A. officinalis, Excoecaria agallocha and Hibiscus tiliaceus with 3 times replicates. Cellulolytic degrading bacteria were isolated with the specific media Carboxy Methyl Cellulose (CMC) with pour plate methode that incubate in 28°C of temperature during 96 hours. The presence of cellulose degrading bacteria was signed by the clear zone around their colony that purified in the Nutrient Agar (NA) medium later. After all, identify the macroscopic and microscopic colony of the pure isolates. The results of isolation and identification of potential bacteria obtained 19 pure isolates of bacteria that consist of three genera namely Bacillus (9 isolates) were found in rhizosphere of A. germinans, A. officinalis, and E. agallocha, Pseudomonas (6 isolates) were found in rhizosphere of A. officinalis, dan E. agallocha, Cellulomonas (4 isolates) were found in rhizosphere of E. agallocha dan H. tiliaceus.

Key word : cellulolytic degrading bacteria, cellulose, mangrove soil, exploration