

ABSTRACT

Arfiani, Amalia Dwi. 2010. *Identification of a Potentially Probiotic Bacteria as Biodecomposer Materials*. Advisors (1) Ir. Liliek Harianie, MP Advisor (2) Dr, drh, Hj Bayyinatul Muchtaromah, M.Sc. Department of Biology, Faculty of Science and Technology, Islamic University of Malang.

Keywords: Bacteria, Probiotics, Biodecomposer.

Eutrophication that occurs in territorial waters causing water plants like eceng gondok grow and multiply rapidly. To address them need to be efforts to use eceng gondok. One of the many ways that are considered effective for overcoming the composting, but the ratio of C / N eceng gondok is low content, a high lignin and cellulose causing the composting process is slow. It is necessary for the addition of composting bioactivator (Biodecomposer) derived from microbial consortium in the form of probiotics. For further biodecomposer development, needs to be done by a microbiological analysis of the content of microbes in a consortium with how to conduct research on the identification of potentially as a probiotic bacteria biodecomposer material.

This research was conducted in the Laboratory of Microbiology and Department of Biology, Faculty of optical Saintek Maulana Malik Ibrahim UIN Malang starting in April-July 2010. This study is exploratory, where the data were analyzed descriptively. Probiotic products were tested with a preliminary test that uses general media (NA), a confirmation test using gram staining, endospore forming, catalase, acid / base, streak aerobic, fermentation and assurance testing using selective media. Probiotic products to be taken 1 ml of dilution up to level 10^{-10} and each was grow non selective medium.

The results showed that certain types the potential probiotic bacteria biodecomposer material as much as 13 kinds of bacteria isolates with 7 genera of bacterial isolates with code A.03, B.21, B.24, and B.25 included in the genus Bacillus, isolates with the code A.10 and C.21 included in the genus Lactobacillus, isolates with the code included in the genus Pseudomonas A.30, B.27 isolates with the code included in the genus Micrococcus, isolates with code C.05, C.29, and C.34 including in the genus Escherichia, isolates with the code included in the genus Aerococcus C.14, C.35 isolates with the code included in the genus Sphaerophorus. By knowing the genes can be said that there are similarities between probiotic products with ingredients biodecomposer. The most dominant bacterial genus is the genus of Bacillus with the average 4.48×10^7 cfu/ml.