

Laila, N. N, 2016, “*Lactobacillus bulgaricus* Sebagai Probiotik Guna Peningkatan Kualitas Ampas Tahu Untuk Pakan Cacing Tanah”, SKRIPSI, dibawah bimbingan Dr. Purkan, M.Si dan Dr. Sri Sumarsih, M.Si, Program Studi S-1 Kimia, Departemen Kimia, Fakultas Sains dan Teknologi, Universitas Airlangga, Surabaya.

ABSTRAK

Penelitian ini bertujuan untuk menentukan aktivitas protease dari probiotik *Lactobacillus bulgaricus* dan pengaruh probiotik *Lactobacillus bulgaricus* dalam fermentasi pakan ampas tahu untuk meningkatkan produktivitas cacing tanah. Metode yang digunakan untuk penentuan aktivitas protease dalam hidrolisis substrat kasein adalah metode Bradford. Dari hasil penelitian, probiotik *Lactobacillus bulgaricus* mengeluarkan protease selama 18 jam pertumbuhan, dengan aktivitas protease sebesar 131,04 U/mL. Probiotik *Lactobacillus bulgaricus* OD 0,6 dapat menghidrolisis protein ampas tahu sebesar 1,48 µg/mL dalam 12 jam fermentasi. Produktivitas cacing tanah mengalami peningkatan berat cacing tanah karena adanya pengaruh probiotik *Lactobacillus bulgaricus* pada pakan ampas tahu yang ditunjukkan dengan persen kenaikan berat cacing tanah sebesar 32,13%.

Kata kunci: Probiotik, *Lactobacillus bulgaricus*, Enzim protease, Cacing tanah

Laila, N. N, 2016, “*Lactobacillus bulgaricus* As Probiotics For Quality Improvement Tofu Dregs At Feeding Earthworm”, Thesis, Supervised by Dr. Purkan, M.Si and Dr. Sri Sumarsih, M.Si, S-1 Study Program of Chemistry, Chemistry Departement, Faculty of Science and Technology, Airlangga University.

ABSTRACT

The aims of this study were to determine the protease activity of the *Lactobacillus bulgaricus* probiotic and to know the effect of tofu dregs feed fermentation in increment of the earthworms productivity. The Bradford method was used for determination of protease activity in the hydrolysis of casein substrate. From the research, the *Lactobacillus bulgaricus* probiotic released protease during 18 hours of growth and the protease activity was 131,04 U/mL. *Lactobacillus bulgaricus* probiotic in 0.6 OD could hydrolyze protein of tofu dregs as well as 1.48 µg/mL during 12 hours of fermentation. The earthworms productivity could increase the weight of earthworms due to the influence of *Lactobacillus bulgaricus* probiotic in tofu dregs feed, it was indicated by the increment of earthworms weight up to 32.13%.

Keywords: probiotics, Lactobacillus bulgaricus, protease enzyme, Earthworms