**THE EFFECT OF INOCULUM COMBINATION IN BANANA STEM (*Musa paradisiaca*) FERMENTATION ON CRUDE FIBER AND FIBER FRACTION**

**Suribto**

**NIM : 12021008**

**ABSTRACT** \*)**[[1]](#footnote-2)**

This research aims was to know the influence of various inoculum combination in fermentation of banana stem (*Musa paradisiaca*) on crude fiber and fiber fraction levels. The research was carried out on 09 November 2015 till 25 February 2016 in the Microbiology Laboratory and Chemical Laboratory, University of Mercu Buana Yogyakarta. The material used is the stem of banana (*Musa paradisiaca*), inoculum *Aspergillus niger*, *Saccaromyces cerevisiae* and *Rhizopus sp*. The research using Completely Randommize Design (RAL) one way with 5 treatments and 3 replicates.The treatments used i.e. P0 (without Inoculum), P1 (Inoculum *Aspergillus niger*), P2 (Inoculum *Aspergillus niger + Rhizopus sp*), P3 (Inoculum *Aspergillus niger +Saccaromyces cerevisiae*) and P4 (Inoculum *Aspergillus niger + Rhizopus sp + Saccaromyces cerevisiae*). The observed variable is crude fiber , hemicellulose, cellulose, and lignin levels. If the data acquired in ANAVA statistic analysis was difference, then continued with *Duncan's Multile Range Test* (DMRT). Average levels of coarse fibers, levels of hemicellulose, cellulose and lignin levels levels from P0 to P4 coarse fiber levels i.e. P0:54,94%; P1:53,52%; P2:52,82%; P3:52,84%; and P4:51,67%; levels of hemicellulose P0:13,69%; P1:11,83%; P2:11,49%; P3:11,98%; and P4:12,35%. Levels of cellulose P0:27,65%; P1:27,89%; P2:27,39%; P3:26,99%; and P4:26,16%; levels of lignin P0:13,60%; P1:13,79%; P2:13,94%; P3:13,86%; and P4:13,16%. Based on the results and discussion could be concluded that with the use of inokulum combination can degrade the levels of crude fibers and hemicellulose, but have not significantly degrade cellulose and lignin on the stem of banana (*Musa paradisiaca*) fermentation.

Keywords: Banana stem (*Musa paradisiaca*), fermentation, inokulum, crude fiber, fiber fraction.

1. \*) The Abstract of Thesis of Animal Husbandry Degree , Faculty of Agroindustry, University of Mercu Buana Yogyakarta, 2016. [↑](#footnote-ref-2)