ABSTRACT

This research was to identify and analyze the activity and change of cacao skin waste compost during the decomposition process, analyze the effect of several bioactivators of MOL towards the quality of cacao skin compost and determine the most effective bioactivator of MOL to decompose the cacao skin. This research was done from May – September 2016, by using experimental method, arranged on RAL (Complete Random Arrangement) single factor with 4 treatments which were 1 liter/25kg of MOL of banana hump, 1 liter/25kg MOL of bamboo, 1 liter/25kg MOL of cow's rumen contents and 50 ml/25kg EM4. Each of them was repeated 3 times so that there were 12 units of experiments. The parameters that were observed encompassing observation of changes in microbiological, physical, chemical and compost maturity test.

The microbe identification of banana hump MOL, MOL of bamboo and MOL of cow's rumen content produced 13 varieties of bacteria and 3 varieties of fungi. The MOL bacteria was suspected as Bacillus sp. and Streptococcus sp. The MOL fungi was suspected as a group of Penicillium sp., Aspergillus sp. and Trichoderma sp. The bioactivator of MOL can be used as an alternative of EM4 on cacao skin decomposition. The banana hump MOL, MOL of bamboo, MOL of cow's rumen content and EM4 experienced a change at the same time during compost maturation process. The cacao skin compost on MOL of banana hump, MOL of bamboo, MOL of cow's rumen and EM4 had been appropriate with the standard of quality compost SNI 19-7030-2004, except C/N ratio.

Keywords : Bioactivator, MOL, Cacao Skin Compost