

ABSTRACT

Chaidir Nurifan. 2017. Comparison of Starter Disposal of Livestock Wastes on Hyacinth (*Eichornia crassipes*) of Gas Volume and Fire Quality. Guided by Dr. H. Uus Toharudin, M.Pd, and Drs. H. Ahmad Mulyadi, M.Pd.

The purpose of this research is to know the comparison information of starter manure on hyacinth on the volume of gas and the quality of fire produced. This research method uses the experimental method on plastic bucket reactor by using Complete Random Design (RAL) design. The results of this study were analyzed using SPSS software version 23. Parameters observe include gas volume and flame test. The results from data analysis reject the hypothesis. The result of gas volume shows the balloon that expands only on the treatment of cow dung (A5), buffalo dung (B5), and horse dirt (C2) the rest of the balloon does not expand. The results obtained cow dung produce the highest volume with an average of 49.75 cm³, then buffalo dung as much as 29.4 cm³ and the average volume from horse dung as much as 5.7 cm³. On the flame test results from the expanding volume and flame from different livestock starter on hyacinth while in the flame test, the volume of gas produced is not maximal because there is no methane gas. Suggestions that can be given need an existence of supporting data about environmental factor like temperature, ratio C/N, gas chromatografi, and pH. For the further research can use the same material but the number of starters can be added so that the fermentation faster with a ratio of 1:1:1 and 1:2:1.

Keywords: Biogas, Hyacinth, Livestock Manure, Fermentation