

## ABSTRACT

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### THE EFFECT OF ADDITION OF PAPAYA FRUIT MOL (*Carica Papaya L*) ON BIOGAS QUANTITY OF HORSE DIRTY MATERIALS

viii + 47 page + 12 table + 4 pictures + 2 attachments.

Human dependence on fossil fuels causes reserves of energy sources is increasingly diminishing, but it also affects the environment, such as air pollution. To overcome this problem, alternative fuels that are cheap and easy to obtain are needed. One of the alternative fuels is biogas

This study aims to determine the effect of horse manure biogas volume produced from the addition of papaya moles, so that the most optimal addition of moles. Four treatment groups were based on different formulas namely 3%, 2.5%, 2% and 0% papaya moles with one test. Digester has a capacity of 10 liters used for 42 days of observation. The main parameters are the volume of biogas every 3 weeks, and the composition of the biogas. The material used in this research object is horse dung, water and moles of papaya. average biogas volume of 2,555 ml, 3,700 ml, 2,300 ml and 2,322 ml and produce total biogas volume of 5,110 ml, 7,400 ml, 4,600 ml, and 4,645 ml.

The conclusion obtained from this study is that the addition of the most optimal mole of papaya is the addition of 3% mole by producing gas volume in the 3rd week of 2,600 ml and in the 6th week of 4,800 ml.

It needs to be further investigated for its chemical parameters (N, P, K, S) another model is developed by adding nutrients to the mole in the form of phosphates and urea and is developed related to the number of samples 1 formulation so that accurate results are obtained

Keywords: Biogas, Horse Manure, mole, biogas volume.