

ABSTRACT

Ministry of Health Republic of Indonesia
Polytechnic Ministry of Health Surabaya
Sanitation Study Program D-III Study Program Environmental Health Department
Final Project, July 2021

Indriani Wibowo

STUDY ON THE INFLUENCE OF MARKET TYPES OF ORGANIC WASTE, INSPECIALLY VEGETABLE WASTE ON BIOGAS PRODUCTION

ix+85 pages+16 Tables+14 Figures+5 Appendices

The processing and utilization of market organic waste, especially vegetable waste, is still not optimal, so appropriate technology is needed in its processing such as biogas that can utilize organic waste as raw material in biogas production. This study aims to determine the effect of the type of market organic waste, especially vegetable waste on biogas production which includes the volume of biogas, the time required for the production process, and the flame test.

The type and design in this study is a single case *study*. This study uses raw materials from several types of vegetable waste, namely mustard greens, cabbage, kale, spinach, and cassava leaves with a ratio of raw materials and water that is 1 kg: 1.5 liters, input system *batch fermentation* (one time input), and fermentation time for 4 weeks (28 days). This research was conducted with 3 replications on each type of vegetable waste.

The results showed that the highest biogas volume was in the cabbage waste type (1,545 liters), while the lowest was in the cassava leaf waste type (0.449 liters). cassava leaf waste after the 3rd week. The biogas flame test on each type of vegetable waste physically almost resembles LPG gas with a reddish yellow color.

Keywords : Biogas Production, Vegetable Waste

Reading list : 40 Readings (2006-2019)