ABSTRACT

Biogas is one of the alternative source energy that is produced by anaerobic fermentation of organic material in the digester. One of the factors that can affect the production of biogas is a variation of substrate level. The impact of substrate level on laboratory scale anaerobic digester for methane prodoction has been investigated. The substrate consist of cow manure and tofu wastewater with volume ratio of 2:1. The investigation was condacted for substrate level of 65%, 75% and 85% of the total digester volume. The trapezoidal methode is used to calculate the amount of methane. The results showed that variations in the substrate level 75% of the total volume digester has a faster HRT is on day 23, and has methane production 160.93 unit area milliliter or greater 7.92% of the level of 65% and greater 42 , 15% of the level of 85%.

Keywords : *Biogas, Digester, Substrate Level, Methane.*