

## ABSTRACT

Biogas is one of alternative energy to reduce the energy crisis. A substrate used in biogas is a mixture of cow manure and tofu wastewater. To realize a substrate into biogas in maximum, then there needs to be research on performance based on analysis of the parameters of gaseous oxygen biogas digester. Digester biogas is an important role in the process of biogas this. Biogas conditioned anaerobic digester, easy to use and materials the construction is easy to use and able to send as well as maintaining heat well. From the results of this research made architecture typical analysis for digester biogas anaerobic, easy to use and capable of delivering and keeping the heat very well. The architecture made one stage (Single Stage) with a volume of 6 litres made of stainless steel. On a typical analysis for digester biogas observed levels of oxygen gas for 25 days with an early variation of the oxygen levels of 0,2%,10,7%,15.7% 17,8% and 18,1%. The results showed that a typical analysis for digester with very small levels of oxygen 0.2% yield methane concentration 62,73% greater than the four other variations, due to bacteria on biogas methane gas to generate more productive on anaerobic conditions or the less oxygen levels. The less oxygen levels at digester, methane gas produced larger, so also on the other hand the greater levels of oxygen at digester then methane gas produced the less.

**Keywords :** biogas, methane gas, oxygen levels, cow manure, tofu wastewater.