

## **ABSTRACT**

Biogas is one of development alternative energy which continuous developed until currenly from decomposition product of organic material by fermentative bacteria with anaerobic process. One Production From biogas is methane with Utilization as Fuel Substitute Kerosene, LPG (Liquefied Petroleum Gas), as well as Energy Source Power Plant.

In this research, organic material was used is sour milk as substrate by conditioning the acidity. To maintain process anaerobic use reactor with ABR (Anaerobic Baffled Reactor) type with semi continuous process are doing constanly scale refilling substrate process with the intention of pH value and volume of gas produced during the experiment generates stable value so the process underway operates optimal biogas, other than that from design and price aspect ABR (anaerobic Baffled Reactor) easy to build and inexpensive because no part of mixing machine (Mechanical mixing Device).

The objective of the research is determine the effect of refilling sour milk substrate to methane gas concentrations on ABR (Anaerobic Baffled Reactor) with different refilling sour milk substrate variations every 1,5 hours, 3 hours and 6 hours during refiling sour milk substrat test. Measurement methane gas concentrations use chromatography gas tests.

**Keywords:** Biogas, ABR (Anaerobic Baffled Reactor), methane gas