

## **ABSTRACT**

*Biogas typically refers to a mixture of different gases produced by the breakdown of organic matter in the absence of oxygen. Biogas can be produced from raw materials such as agricultural waste, manure, municipal waste, plant material, sewage, green waste or food waste. Biogas can be produced by anaerobic digestion with anaerobic organisms, which digest material inside a closed system, or fermentation of biodegradable materials.*

*The purpose of this study identify and analyze the simulation results biogas based ADMI related to the results of methane. The main focus on the simulation modeling of biogas production based on standard IWA ADMI (Anaerobic Digestion Model No. 1) . This model is defined by a set of differential and algebraic equation (DAE).*

*In this study, glucose is used as biogas substrate. The simulation results showed that the results of the product on the substrate showed high sensitivity for models of each component and the concentration of methane is the most sensitive components associated with all the processes that are used in the model . For the development of further research in this ADMI models expected more components and its variations are used in the simulation in order to get an overview of methane for better results .*

*Keyword: ADMI; Biogas; Modeling.*