

## **ABSTRACT**

*Skin and liquid waste of soybean contain various type of carbohydrate. The waste can be used as biomass material. Anaerobic dark fermentation of biomass can produce hydrogen gas. The purpose of the research was to investigate biogas potential of soybean waste. Skin and liquid waste of soybean was investigated. Fermented sludge used as bacterial culture. The result show that hydrogen gas of substrate comprising mixture of soybean skin waste and fermented sludge is very low, while mixture of liquid waste and fermented sludge is high. Substrate comprising mixture of soybean liquid waste and fermented sludge was produced biogas with cumulative volume is 14,026 liters and average biogas production is 1,275 liter/day.*