

**Pembuatan Biogas Limbah Kulit kakao (*Theobroma Cacao L.*) Dengan Menggunakan Starter Rumen Sapi**  
(Making of Cocoa Leather Wastewater Biogas (*Theobroma Cacao L.*) Using Rumen Cow Starter)

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***ABSTRACT***

Cocoa leather contains 50.90% cellulose, 7.14% hemicellulose, which is a food from methanogenic bacteria forming methane and 5.90% protein as a source of nitrogen. Wet cocoa fruit skin contains C / N ratio of 20-25. The composition of 74% cocoa is cocoa (Opeke, 1984). Cow rumen fluid from animal slaughterhouses can be utilized as biostarter to accelerate the fermentation process of dirt to produce and increase methane gas production in biogas (Susilowati, 2009). The energy contained in the bio gas depends on the concentration of methane (CH<sub>4</sub>). The higher the methane content the greater the energy content (calorific value) in biogas, and the smaller the methane content the smaller the calorific value (Pambudi, 2008). The content of water content in cocoa leather waste was 81.56%, with dry matter weight of 18.43%. The average yield produced in the biogas research of the most significant 30 days of cocoa, water and rumen leather waste mix was biogas in the ratio of 7: 6 with the total average amount produced was 13,715 ml, and the lowest production in comparison 7: 8 with the resulting total number of 8,648 ml. the average biogas production rate is directly proportional to the volume of biogas produced. The higher the volume of biogas produced the faster the rate of biogas production, vice versa when the volume of biogas production decreased, the biogas production rate decreased.

*Keywords: Cocoa, Rumen Cow, Biogas.*