

The performance of biogas production from pome at different temperatures

Sarono, author

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Abstrak

Indonesia, as the largest palm oil producer in the world, also produces palm oil mill effluent (POME). While the latter is a liquid waste that is hazardous for the environment, with proper processing, it can be a potential energy source. The objective of this study was to study the performance of biogas production from POME at various temperatures. The POME and sludge mixture was fermented, according to the treatment, at 27-28oC, 45oC, and 55oC, with the results showing that methane could thereby be produced by as much as 0,19 m³, 0,25 m³, and 0,28 m³ respectively. For each kilogram of chemical oxygen demand (COD) removal, with POME fermentation at room temperature, 45oC, and 55oC, biogas could be produced with methane content of 65.44%, 62.57%, and 59.15%, respectively.