ABSTRACT

The use of energy in Indonesia continues to increase over time, considering that the current energy sources are expected to run out. Therefore we need an alternative energy development as a renewable energy source. Using the Microbial Fuel Cell Single Chamber method is one of the renewable energy innovations. The working principle of this method converts chemical energy into electrical energy by utilizing bacteria to produce electrical energy from organic matter. Measurements in this study used milkfish mud in North Jakarta. There are 2 variations in this research, the variation of the milkfish mud with the addition of stale rice for three days, and the second variation of the milkfish mud with the addition of NaCl. The parameters measured are voltage, current, and power density. This measurement is carried out for 3 hours with an observation interval of every five minutes, measurements are carried out in two ways, namely by using a voltage sensor, Arduino Uno microcontroller, and using a multimeter with an additional 10Ω resistor. The results of this study indicate that the milkfish pond mud is able to produce values with variations in the addition of stale rice as much as 110.1gr in reactor C 670mW / m2 and variations in the addition of NaCl with a salinity of 30 ‰ in reactor B 200.88 mW / m2.

Keywords: *Microbial Fuel Cell Single Chamber, Brackish Water, Electric Energy*