

## ABSTRACT

*Microbial Fuel Cell (MFC) is a system that utilizes bacteria to oxidize organic and inorganic materials. This study aims to produce electric current with the effect of temperature variations between 28°C - 38°C. While the reactor using a salt bridge dual chamber with the anode and cathode compartment, in a dual reactor chamber to the anode compartment is filled by mud fields substrate while the cathode compartment filled with liquid aquades water. For electrodes using zinc and copper. Electrons flowing in the electric current is transferred through the anode to the cathode while the proton is passed through the salt bridge. The study reached 6677 mJ, and a power of 0.4637 mW. As for the results of measurements of highest electrical current strength with value 0.581 mA and the highest voltage with a value of 0.847 volt. Based on the results of this study can be concluded that the production of electric current from a temperature change is not too have a significant impact, the temperature of 38 ° C is the best temperature to produce an electric current.*

*Keywords: Microbial Fuel Cell, Temperature, mud fields.*