

## ABSTRACT

*Microbial Fuel Cell* (MFC) is one of the type of renewable energy to produce electricity. The use of MFC can help manage existing waste without chemicals that can help make electricity. This study aims to determine the magnitude of the effect of rotten tomato substrate coupled with rice mud to produce electricity. The reactor used with a dual-chamber system. The study was conducted for 1 week with data collection per two hours which produced varying voltages and currents but the differences were not significant. The average flow produced on each substrate is 3.7, and 11 days, which are 0.17 mA; 0,15 mA; 0.18 mA and the resulting average voltage is 552,05 mV, 456,17 mV, 439,31 mV. The electrons produced by bacteria from the substrate in the anode compartment are transferred to the cathode compartment via the salt bridge. Rotten tomatoes are used as substrate in the anode compartment, distilled in the compartment, and salt bridges (1M NaCl) as proton transfer media. With the addition of electrolyte tembaga (Cu) and zinc (Zn) which are capable of producing good electrical energy.

Keywords: Microbial Fuel Cell, rotten tomatoes, electrode.