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**Comparison of Electrodes in Soil and Wastewater Microbial Fuel Cells** KEVIN POWERS, ORCUN OZKOCAK, AMBER WARD, TAHZEEBA FRISBY, SAEED AHMAD, Cameron University — Different types of electrodes are used to study efficiency as a function of the cathode surface area in soil and wastewater microbial fuel cells (MFCs). Proton exchange membrane is used as a separator in the two compartment fuel cells. Peak voltage of 6.5 V was obtained for platinum-platinum electrodes with a maximum current of 15$\mu$A and a peak voltage of 1.2 V with a maximum current of 15$\mu$A with carbon-copper electrodes of surface area 2.5 cm x 5.0 cm. Maximum power is obtained in a few hours of construction of the MFCs and is observed to sustain for at least two weeks.

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