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*Powerful Garbage*

The purpose of this project is to build functional MFC and to test my hypothesis that samples of waste containing more organic matter would produce more electricity. Using two microbial fuel cells that I built, I measured and compared the electrical output from samples of river mud and topsoil mud. I hypothesized that river mud will produce more electricity because rivers are gathering areas for nutrients derived over the entire watershed as opposed to topsoil which represents one source of nutrients in a watershed. I found that an MFC, if assembled correctly, will extract electricity from bacterial decomposition. I was also able to show that my hypothesis was correct. The river mud sample produced more electricity more consistently than did the topsoil sample. I conclude that nutrient rich wastes such as sewage could be used to create electricity in an MFC. This process could potentially make homes self-sufficient, electricity producers.