

Biofilm Bacterial Community in Microbial Fuel Cells (MFCs) using Denaturing Gradient Gel Electrophoresis (DGGE) Analysis

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Microbial fuel cells (MFCs) can be used to directly generate electricity from the oxidation of dissolved organic matter. It is also possible to produce electricity in a MFC from domestic wastewater, while at the same time accomplishing biological wastewater treatment. MFCs use microorganisms for production of electrical energy. In this study, PCR-DGGE analysis of 16S rRNA genes was employed to investigate the microbial community in MFCs using wastewater. Different microbial profiles were observed with biofilm samples obtained from two MFCs (Anode 1 & Anode 2) that were used for different operation periods. In the biofilm samples, nucleotide sequences of dominant DGGE bands were affiliated with *Clostridium butyricum* and *Bacillus cereus*. Profile of microbial culture inoculated into the MFCs was different from those observed with anode biofilm.