Electricity generation in the biofuel cell using *Shewanella putrefaciens* CN32 and Laccase

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The production of electricity by Shewanella putrefaciens CN32 was examined in a two-compartment biofuel cell (BFC). Lactate which can be utilized by this strain was used as the electron donor in the anode compartment. The anode side was purged with the nitrogen gas. Carbon paper and carbon fiber were used for both an anode and cathode site according to circumstances. The cathode compartment was prepared by applying a small amount of catalyst, typically carbon-supported platinum to enhance electricity generation by S. putrefaciens CN32. In order to replace expensive platinum, laccase was used as catalyst in cathode of BFC.