

Microbial fuel cell by *Klebsiella pneumoniae* J2B using glucose as a substrate

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Bioelectricity is highlighted as an alternative for fossil fuel energy. Microbial fuel cells (MFCs) are a bioelectricity generation system using exoelectrogens as a catalyst. *Klebsiella pneumoniae* was reported as one of the exoelectrogen excreting mediator for electron transfer. In this study, *K. pneumoniae* J2B was employed into H-type MFC for electrogenesis with glucose as electron donor. The potential was measured as 4.8 ± 0.9 mV at a resistance of 2,000 Ω and current at 2.4 ± 0.8 μ A after 6 hour inoculation. The polarization curves might present that *K. pneumoniae* J2B strain produced mediators for extracellular electron transfer. Although this system produced low electricity, *K. pneumoniae* J2B strain seems to be potential exoelectrogen for generating electricity from glucose in MFC system; it can be applied in industrial fermentation through the change the intracellular redox potential.