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SACCHAROMYCES CEREVISIAE CELL MODIFICATION WITH NICKEL AND FERRIC HEXACYANOFERRATES FOR THE APPLICATION IN BIO-FUEL CELL CONSTRUCTION

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Although Saccharomyces cerevisiae cells are popular in the formation of bio-fuel cells due to their low cost and availability, the conductivity of yeast cell walls limits charge transfer. This research aims to enhance the yeast cell wall conductivity by modifying Saccharomyces cerevisiae cells with iron (III) hexacyanoferrate (II) and nickel hexacyanoferrate (II). The conductivities of modified yeast cells were measured using cyclic voltammetry. Additionally, bio-fuel cells were constructed, and their power was measured under different resistances. Changes in bio-fuel cell power over time were also recorded.