

Use of tungsten nanoparticles for screening electroactive *Pseudomonas* species from the anaerobic sludge for the microbial fuel cell operation

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Pseudomonas sp. has been known to have diverse capability of feedstock conversion and bioremediation for recalcitrant organic contaminants, thus extensively studied for its metabolic pathway and recombination purposes. Recently, *Pseudomonas* sp. has been highlighted for production of valuable commodity, bioremediation, biosensor and wastewater treatment, therefore many *Pseudomonas* strains have been screened by various isolation strategies. Some *Pseudomonas* sp. showed an electrochemical activity which transfer their respiratory electron to carbon electrode with simultaneous electricity generation in a microbial fuel cell. In this study, we isolated a novel *Pseudomonas* strain using blue white screening method using tungsten nanoparticle. The enrichment stage used a designed growth media to pose selective pressure for growth of *Pseudomonas* from mixed inoculum. *Pseudomonas aeruginosa* sp. (PBH03) was isolated and was tested for electrochemical and bioconversion activity in defined media under complete anoxic condition. The results showed that the PBH03 presented higher bioelectrochemical activity and performance in microbial fuel cell (Poster).