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| **Title:** | Double compartment microbial fuel cell design using salt bridge as a membrane with sucrose and starch as a substrate | | |
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| **Abstract:** |  |
| Most of the microbial fuel cell (MFC) designs need the separation of the cathode and anode cell by using proton exchange membrane (PEM). The majority used nafion or ultrex CMI-7000 as a PEM. But both of these membranes are too much costly and not too available to use. As an alternate of nafion, we use salt bridge in this study as a PEM which is pervious to other ions & substrate. Different organic materials like sucrose, glucose, starch can be used as substrate. This research paper analyses the performance of a double compartment microbial fuel cell for different substrate concentrations as well as surface area of the chambers with salt bridge as a membrane. Sucrose and starch were treated here as substrate and potassium permanganate was used as electron acceptor. Dhaka city's drain water was utilized as the container of bacteria. Better output was observed for sucrose as substrate due to higher solubility in water than starch. | |