BIOCEMENT CONCRETE

Biocement concrete is a special type of concrete that uses biocement as the binding material. In Biocement, the MICP Technique is used to precipitate calcium carbonate, which acts like a binder. Microbial-induced calcium carbonate precipitation (MICP) is a technique that uses the metabolic action of microorganisms to produce CO_3^{2-} , which combines with free Ca^{2+} to form $Caco_3$ precipitation. This study aims to check the possibility of using biocement concrete as an efficient, sustainable material in the construction field. Different tests are proposed to be conducted to evaluate the workability, engineering properties and durability of concrete. By incorporating biocement into a microbial fuel structure, the power generation capacity of biocement concrete is also proposed to be evaluated. Methodology of the project includes evaluation of physical properties of raw materials, production of biocement, mix design, casting and testing of specimens and finally analysis of the results to reach at a conclusion.