IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, December 2022
Impact Factor: 6.252

Characterization and Standardization of Cultural Conditions of Sulphur-Oxidizing Bacteria Isolated from Soil Samples

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Abstract: *Sulphur-oxidizing bacteria are the important organism of sulphur cycle. SOB is the dominating prokaryote with the ability to oxidize sulphur in to absorbable form sulphate. The ability to metabolize organic and inorganic form of sulphur make them organism of interest in soil. In nature SOB are the versatile microorganisms found in normal to acidic/alkaline soil, water habitat to extreme conditions of geothermal areas, acid drains and volcanic eruptions. The amount of sulphur oxidation depends on the physico-chemical conditions. The quantity of sulphate ion produced by SOB is drastically affected by cultural conditions. Attempts are made to standardize the cultural conditions and same was optimized for five SOB. The incubation time was optimized to 2 days at 30^0C with media pH 8.0. The carbon source improving sulphate ion production is glucose and nitrogen source is ammonium chloride.*

Keywords: Sulphur, Sulphate ion, SOB, Oxidize, cultural conditions.

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