

Poster Presentation: "Biodegradation of Some Phenolic Compounds by a Strain of *Pseudomonas aeruginosa*"

Marwa Raafat ,Ahmed Falah, Manar Magdy, Amal E. Ali, Tammer Essam

Lecturer in Microbiology and Immunology

Abstract

Phenolic compounds are among the pollutants commonly found in waste byproduct of many industries due to their use as chemical intermediates for the synthesis of pharmaceutical and organic compounds. The untreated industrial effluent containing phenolic compounds may affect seriously living organisms. The use of bacteria to remediate phenolic compounds offers an attractive and efficient alternative compared to other methods. The aim of the present work is to test the ability of a locally isolated strain of *Pseudomonas aeruginosa* to degrade phenolic compounds. Phenolic compounds degradation was carried out in Minimal Salt Media (MSM) supplemented with 0.025% of each of the compounds as the sole carbon source. The growth of the bacterial strain was monitored by measuring optical density at 600nm over a period of 5 days. Phenolic compounds degradation was followed spectrophotometrically at 280nm. Preliminary results showed that bacterial growth started after 48 hours, maximum biodegradation was after 72 hours. Further investigations will be carried out to assess the toxicity and identity of the produced metabolites, elucidate the mechanism and to optimize the factors affecting the process.

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