

EVALUATION OF THE GROWTH OF *PSEUDOMONAS* DIFFERENT SPECIES ON LUBRICANT OIL

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The great metabolic diversity of the *Pseudomonas* genus makes possible the use of these microorganisms on the ambient contaminations treatment. The intention of this work was to evaluate the growth of the different species of *Pseudomonas* on lubricant oil and verifying the extracellular production of rhamnolipid biosurfactant. Strains of *P. putida*, *P. aeruginosa* and *P. fluorescens*, were inoculated in solid medium containing 1 % lubricant oil, 0.1 % NaCl and 0.1% of one of the three different nitrogen sources [yeast extract, NaNO₃ and (NH₄)₂SO₄]. The production of the biosurfactant was verified in medium described by Siegmund & Wagner (1991), which is constituted of KH₂PO₄; Na₂HPO₄; NaNO₃; MgSO₄; CaCl₂; Agar; FeSO₄; MnSO₄; (NH₄)₆MnO₇; CTAB and of methylene blue. From the evaluated species, *P. putida* showed a growth reduction in a medium containing NaNO₃ and (NH₄)₂SO₄, while *P. fluorescens* showed only a growth reduced when cultivated under NaNO₃ as nitrogen sources. On the other hand, *P. aeruginosa* did not presented any variation of growth by using the tree different studied nitrogen sources, being such species the one that secreted the highest concentration of rhamnolipid. The results point out the potential use of *P. aeruginosa* bioremediation studies of petroleum derivatives.

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Key words: *Pseudomonas*, biosurfactant; bioremediation