Bioremediation: Data on Biologically-Mediated Remediation of Crude Oil (Escravos Light) Polluted Soil using Aspergillus niger

Modupe Elizabeth Ojewumi , Joshua Olusegun Okeniyi , Elizabeth Toyin Okeniyi , Jacob Olumuyiwa Ikotun , Valentina Anenih Ejemen , Esther Titilayo Akinlabi

PII: S2405-8300(18)30043-0
DOI: https://doi.org/10.1016/j.cdc.2018.09.002
Reference: CDC 142

To appear in: *Chemical Data Collections*

Received date: 24 February 2018
Revised date: 4 September 2018
Accepted date: 10 September 2018

Please cite this article as: Modupe Elizabeth Ojewumi , Joshua Olusegun Okeniyi , Elizabeth Toyin Okeniyi , Jacob Olumuyiwa Ikotun , Valentina Anenih Ejemen , Esther Titilayo Akinlabi , Bioremediation: Data on Biologically-Mediated Remediation of Crude Oil (Escravos Light) Polluted Soil using Aspergillus niger, *Chemical Data Collections* (2018), doi: https://doi.org/10.1016/j.cdc.2018.09.002

Chemical Data Collections

Title: Bioremediation: Data on Biologically-Mediated Remediation of Crude Oil (Escravos Light) Polluted Soil using *Aspergillus niger*

Authors: Modupe Elizabeth Ojewumi[1*], Joshua Olusegun Okeniyi[2,3], Elizabeth Toyin Okeniyi[4], Jacob Olumuyiwa Ikotun[5], Valentina Anenih Ejemen[1], Esther Titilayo Akinlabi[3]

Affiliations:

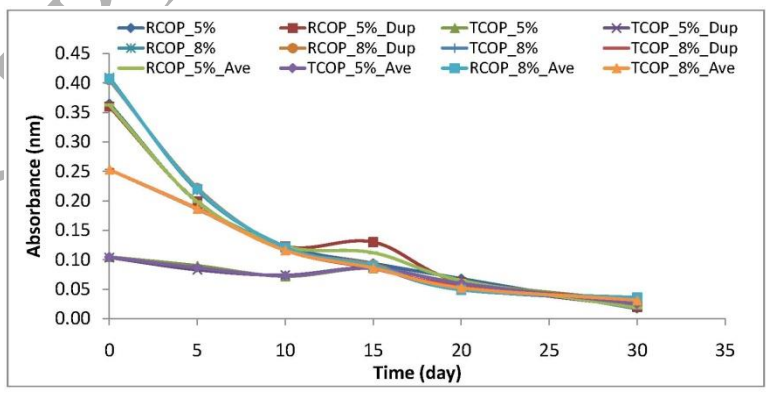
[1]*Chemical Engineering Department, Covenant University, Ota, Ogun state, Nigeria*
[2]*Mechanical Engineering Department, Covenant University, Ota, Ogun state, Nigeria*
[3]*Department of Mechanical Engineering Science, University of Johannesburg, Johannesburg, South Africa*
[4]*Petroleum Engineering Department, Covenant University, Ota, Ogun state, Nigeria*
[5]*Department of Civil Engineering and Building, Vaal University of Technology, Vanderbijlpark, South Africa*

Contact email: *modupe.ojewumi@covenantuniversity.edu.ng*

Abstract

This article presents data on *Aspergillus niger* effects on the biologically-mediated remediation of soil polluted by raw and treated crude oil (Escravos Light blend). Absorbance of different concentrations of polluted soil samples (5% and 8% w/w) and types (raw and treated), for simulating different onshore crude oil spill, were obtained from the *Aspergillus niger* inoculated samples using ultra violet-visible (UV-Vis) spectrophotometry. This measurement was carried out for each sample at selected intervals for the 30-day measurements. The bioremediation data, presented in the article, were subjected to descriptive/analytical statistics of probability density functions and goodness-of-fit test-statistics for dataset-detailing and dataset-comparisons. Information details from these data of biologically-mediated remediation of crude oil polluted soil are useful for furthering research on bioremediation kinetics such as hydrocarbon content analyses, crude oil pollutant removal performance, biodegradation rate parameter and biostimulant efficiencies by the *Aspergillus niger* effects on the different concentrations of polluted soil.

Graphical abstract



Keywords: Bioremediation, *Aspergillus niger*, Absorbance, UV-Vis Spectrophotometry, Crude oil polluted soil, Onshore oil pollution simulating system