Phylogenetic Study of Presumptive Oil-degrading Microbes Isolated from The North-western Tip of Pahang

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Abstract

Many construction areas are often contaminated with petroleum compounds. The aim of this work were to isolate and characterize indigenous bacteria isolated at a moderate temperature site as well as to study the pattern of phylogenetic tree among bacterial communities associated with oil degradation. No profound studies have yet been done in the construction site at Tanah Rata. Hence, this research was carried out to find existing status of microbial community from a few selected spots. Enrichment culture technique by using MSM broth has been used to isolate the desired microorganisms. Isolation and characterization tests using phenotypic and genotypic approaches (based on genes encoding 16S rRNA) had led to the discovery of 18 isolates. The 16S rRNA was used due to its functional constant, universally distributed and moderately well discovered across broad phylogenetic distances. The successfully identified genera were Pseudomonas, Bacillus, Exiguobacterium, Stenotrophomonas, Acinetobacter, Serratia and Gamma Proteobacterium.

Keywords

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