Isolation and Characterization of Hydrocarbon Tolerant Microorganisms from Marine Environment

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Abstract

Industrial activities have contributed to the releases of toxic organic compound into environment and have become a major public concern. This particularly of those industries that are located along coastal areas, which are the gateways for water transport. A study of the isolation and characterization of hydrocarbon tolerant microorganisms from marine samples collected at the jetty site of Tanjung Lumpur, Kuantan, Pahang, was conducted. There were very few studies have been done related to marine hydrocarbon tolerant microorganisms in Kuantan. Hence, this research was done to investigate the presence of microbial community that can thrive in the environment with oil-spillage. Enrichment culture technique by using MSM broth supplemented with 1% engine oil was utilized to isolate the desired microorganisms. Biochemical and molecular approaches were applied to identify and characterize the isolates. Six isolates wereidentified as genera Vibrio, Halomonas, Pseudoaltromonas, Idiomarina, Staphylococcus and Halophilic bacterium. In addition, phylogenetic study helps further in understand the relationship among the isolated bacteria.

Keywords

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