

RESEARCH PAPER

Efficiency of bacterial isolates from oil contaminated soil for biodegradation of diesel

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Diesel degrading bacterial isolates Gh1 and Gh15 were isolated from crude oil contaminated soil, oil refinery of Guwahati (Assam, India) located at 26° 11' 0" North, 91° 44' 0" East. Isolates showed optimized growth pattern at 35°C, pH 6.5 and 100 ppm diesel using as the sole carbon and energy. Optical density and gas chromatography were used as evaluation experiment to check the degradation of aromatic hydrocarbons by strain. GC-FID chromatograms indicated the highest degradation efficiency of bacterial strains for aromatic hydrocarbons after 72 hours of incubation. This native microbial isolate could be considered as a powerful approach for the *in-situ* bioremediation of diesel contaminated soil.

Key words : Hydrocarbons, Bacteria, Bioremediation

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