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**Biosurfactant production by bacteria isolated from petroleum contaminated soil**

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Biosurfactants are surface-active biomolecules produced by microorganisms, which are useful biomolecules in the remediation of petroleum contaminated environments. Two bacterial strains isolated from petroleum-contaminated soil of selected motor vehicle workshops and filling stations were screened and characterized morphologically and biochemically. The biosurfactant-producing ability of the strains was determined qualitatively and quantitatively by enrichment culture, hemolytic activity assay, Cetyltrimethylammonium bromide (CTAB) assay, oil displacement assay, foaming activity, and emulsification activity measurement. After conducting various morphological and biochemical studies, the strains were identified as bacteria belonging to the genus *Pseudomonas* and the genus *Micrococcus*. Both bacteria gave positive results for hemolytic activity, CTAB assay, and foaming activity, which gives beta-hemolysis on blood agar, blue colour halos, and stable foam, respectively. The highest displacement was observed from *Pseudomonas* where the diameter was 6.0 cm, while *Micrococcus* showed 3.6 cm activity. Although both bacteria showed an emulsion after 1 minute, the *Pseudomonas* strain showed the highest maximum emulsification index (E24%) of 57.1%. This suggests that the *Pseudomonas* strain could have more potential to facilitate the remediation of hydrocarbon-contaminated sites and produce a higher yield of biosurfactants than the *Micrococcus* strain.

**Keywords:** Biosurfactants, Bacteria, Enrichment, Petroleum contaminated soil

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