Remediation of oil spills using biosurfactant obtained from *Pseudomonas putida*

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Even though petroleum products are the major source of energy for industry as well as day today life, it also poses major concern over hydrocarbon release during its production. These are released into soil, air and water which poses a great danger to the natural habitats. The oil spills from marine water are treated using bioremediation methods as it is one of the promising technologies in future. In our study bioremediation was carried out using microorganisms of *Pseudomonas* species namely *Pseudomonas aeruginosa, Pseudomonas fluorescens* and *Pseudomonas putida*. Out of these the effective strain was found to be *Pseudomonas putida* which gave a degradation capacity of 87%. *Pseudomonas putida* produced biosurfactant which was the initiative to degrade the oil spills at a time around 42-50 hrs. For enhancing the biosurfactant production and growth, glycerol was given as a carbon source (3%). Operation parameters including pH, temperature were studied and found to be 6.5 and 33°C respectively. Testing was done for biodegradation using blue agar plate method and emulsification index method which gave a 76% reduction.

**Biography**

M. Karthikeyan studying M.Tech in the department of chemical engineering at Anna University-Chennai. I have been sited on my project work done in various industries like Oil and Natural Gas Corporation, Dalmia Bharat Cements, Tamilnadu Arasu Cements and Trichy Distilleries and Chemicals.