

**REMEDICATION OF SPILLED OIL USING BIOSURFACTANT
PRODUCED BY GORDONIA SP. JE-1058**

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Biosurfactants are surface-active compounds produced by microorganisms. They have received considerable attention in the area of environmental remediation processes such as bioremediation, soil washing and flushing, and so on. This is due to their effectiveness and environment-friendly qualities. A biosurfactant-producing microorganism, *Gordonia* sp. JE-1058, was isolated from soil and selected as a potential biosurfactant producer with a high emulsifying action on heavy oil.

In this study, a remediation agent, designated as JE1058BS, which contains a biosurfactant produced by *Gordonia* sp. JE-1058, was prepared by using a spray dry method of the sterilized culture broth. In the baffled flask test (BFT) developed by the U.S. Environmental Protection Agency (EPA), JE1058BS showed a strong potential as an oil spill dispersant despite the absence of a solvent. JE1058BS also exhibited effectiveness as a bioremediation agent for oil spills. The addition of JE1058BS stimulated the degradation of weathered crude oil (ANS-521) by the indigenous bacteria present in the seawater. These results indicate that the biosurfactant produced by *Gordonia* sp. JE-1058 has a strong potential to be applied as a remediation agent for the clean-up of oil spills at sea.

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