

B321 **Purification and Properties of Biosurfactant from
Pseudomonas sp. EL-012**

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Pseudomonas sp. EL-012S strain isolated from oil-contaminated soil was able to produce novel biosurfactant using *n*-hexadecane as the carbon source. This biosurfactant was produced in both late-exponential and early-stationary phase. The biosurfactant was purified by silica gel G60 column chromatography. The purified-biosurfactant was consist of type I and type II and confirmed thin layer chromatography, high performed liquid chromatography and gas chromatography. On the basis of structure analysis, it was estimate that type I was carbohydrate-lipid-protein and dropped the surface tension of water to 27dyne/cm and interfacial tension to 4.5dyne/cm against to *n*-hexadecane. Type II was carbohydrate-lipid and dropped the surface tension to 30dyne/cm and interfacial tension to 8dyne/cm. Specially, type I had the properties such as strong emulsifying activity, emulsion stability, pH-stability, thermo-stability, high cleaing activity and forming ability.

B322 **Distribution of Methanotrophic Bacteria in Landfill Soil**

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To examine distribution and characteritics of landfill gas degrading bacteria, it was investigated that microbiological properties of soils collected from landfill. Bacterial distribution was investigated for heterotrophic, methylotrophic and methanotrophic bacteria by plate counting method, MPN method, MF method, respectively. Methanol was added at a concentration of 0.2%(v/v) to culture media for methylotrophic bacteria as sole carbon source and methanotrophic bacteria was incubated under air-methane(1:1, v/v) atmosphere. Isolated strains from heterotrphic bacteria were identified by fatty acid analysis using the MIS. Few quantitative studies on the ecology of methanotrophic bacteria had been published. In this study, the bacterial distribution were ranged from 10^6 ~ 10^8 CFUs/g soil, 10^4 ~ $\geq 10^5$ MPNs/100ml and 10^3 ~ 10^5 CFUs/g soil, respectively.