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## Effect of hydrocarbon toxicity on soil microbial community

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Hydrocarbon contamination of soil is one of the most common pollution issues faced by many regulators, industry and communities. This research aims to identify the ecological impact of hydrocarbon contamination. Soil environmental condition changes may shift the composition and diversity of soil microbial community. Microbial diversity can be defined as the variety of bacterial species in ecosystems along with the genetic variability within each species. Microbial community composition and diversity at diesel-contaminated spiked soils were investigated to understand the interrelationships among soil physical and geochemical properties, pollution level, and microbial community. Forty samples from four different types of soil with various physiochemical characteristics and contaminant concentrations were investigated. Changes in microbial populations due to the presence and concentration of contaminants are dependent on the physiochemical properties of the soil that include geographic region, soil type, and soil pH. Because of environmental stresses or disturbances, the microbial community structure changes and diversity decreases. Still because of vast genotypic and phenotypic diversity it is difficult to characterize soil microbial community.

### Biography

Muhammad Atikul Islam Khan has completed his BSc (Hons) and MSc in Microbiology from the University of Dhaka. After completion of his degree, he joined Renata Ltd., a renowned Pharmaceutical company in Bangladesh (formerly Pfizer laboratories), as a Quality Assurance officer (Microbiologist). He has successfully completed his MBA degree from the same university. He has finished his laboratory technology course from Australia and got trained for 2 months for placement at SA Pathology. Then, he started his PhD at the University of South Australia with prestigious USAPA Scholarship. He has published several papers (Food microbiology and Pharmaceutical technology) on microbial ecology in food and pharmaceutical industries.

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