

Biodegradation of plastics using metagenomics

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Metagenomics is the power of genomic analysis (the analysis of the entire DNA in an organism) that is applied to entire communities of microbes, bypassing the need to isolate and culture individual microbial species. These have applications in various fields like bioremediation and biodegradation. Biodegradation is the decomposition of organic material by microorganisms and bioremediation is the process that uses microorganisms or their enzymes to return the environment altered by contaminants to its original condition.

In terms of bioremediation metagenomics can contribute in degrading plastics. Although these are available in soil and water, degrading microbes are difficult to isolate because they do not exist in high numbers in nature. But can be easily extracted using the soil and water metagenomes. And can be used to degrade plastics artificially and help save environment from the pollution caused by plastics and thus helps mankind.

Biography

Oshin Sharma is pursuing her B. Tech. (5th sem) in the field of Biotechnology from Amity University Rajasthan. She has interests in the field of genetic engineering and life sciences. Her future prospects lies in metagenomics which is related to metagenomics. Above abstract is an illustration of the same.

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