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Editorial

EDITORIAL

Biodegradation of Plastics: Current Need

“Unprecedented technological capabilities combined with unlimited human creativity have given us tremendous power to take on intractable problems like poverty, unemployment, disease, and environmental degradation. Our challenge is to translate this extraordinary potential into meaningful change.”

-Muhammad Yunus

When we see environmental pollution in our surroundings, the majority of them seems to be by the excessive use of non-biodegradable plastics in various practices of daily life of human beings. In an estimation, approximately 140 million tonnes of synthetic polymers are produced all over world each year for daily use. It is really a very serious problem where attention is to be given by the policy makers, researchers, non-governmental agencies and finally by users, so that the problem can be minimized or fully solved. Plastics are synthetic and semi-synthetic polymers, derived primarily from fossil carbon sources such as crude oil and natural gas. Their mechanical properties and characteristics such as low-cost, durability and processability have led to their widespread use for diverse applications. However most commonly used plastics are very resistant to biological degradation. These plastics are highly stable, and do not promptly enter into the degradation cycles of the biosphere. In order to hold persisted sustainable environmental development throughout the world, this problem must be addressed. Although biodegradation of plastics has been studied extensively for the past three decades. Biodegradable polymers have been developed; but awareness for discourage the use of non-biodegradable polymers should be taken in to consideration by concerned agencies for the service of environment. Polyesters, polyhydroxyalkanoates, polylactone, polylactide, polyurethane, polyvinyl alcohol, nylon and polyethylene are the representative of biodegradable polymers which should be used for various purposes.

Glucose has been accounted for to invigorate the biodegradation of the fertilizer utilized as a part of the biodegradation test in a few reports and such kind of additional disintegration of natural C in the manure is known as the priming effect. In a late report, two modern originators and a gathering of microbiologists have outlined an approach to break down plastic and make consumable mushrooms all the while. Mycelia of some of the palatable mushrooms, for example, *Pleurotus ostreatus*, *Schizophyllum commune* etc., were utilized for biodegradation of biodegradable plastics. In spite of the fact that it takes months for the organisms to consume through little bits of plastic. The researchers are presently searching for approaches to accelerate the methodology by controlling the temperature, dampness and different components of the earth inside the vault. They're additionally considering hereditarily altering the

organisms to make them become speedier, however they initially need to discover all the more financing to get that going.

This editorial of International Journal of Applied Sciences and Biotechnology, vol-2, issue-4 is an attempt to make aware and to address the problem related to non-biodegradable polymers in the coming future. In developing countries, projects for educating the people is essential in the direction of solving the problem. The production of non-biodegradable plastics, their selling and use should be banned by legal way by the government of the concerned countries. NGOs and INGOs should take initiative for mass awareness. On the other hand, researches for developing new biodegradable polymers as well as search-efficient microorganisms capable to degrade plastics should be executed.

Umesh P. Shrivastava

Editor-in-Chief
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