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Quantumzyme receives funding from IISc to degrade plastic sustainably

Worked with businesses in India and abroad applying its technology for green chemistry and sustainable solutions

By **Manbeena Chawla** | February 7, 2023



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Quantumzyme, a Bengaluru-based biotransformation company focused on clean and green chemistry, has received a grant from the Indian Institute of Science (IISc) Centre of Excellence to develop an affordable solution to degrade plastic sustainably. Using its innovative technology QZyme Workbench, the company aims to develop the first prototype by the end of the year.

Despite the widespread ban on plastics, the current market for recycling plastic is estimated to be worth $35 billion on an annual basis with 5% compounded growth. A 20% replacement of the same with a greener option would cost about $7 billion a year.

Quantumzyme's QZyme Workbench is a proprietary technology that enables Quantumzyme's scientific team to find and create enzymes for "greening" chemical reactions for PET (plastic) and a variety of other industries, including pharmaceutical, fine chemicals, textiles, flavours & fragrances, and more.

Naveen Kulkarni, CEO, Quantumzyme, stated, "We are grateful for IISc's support in helping us create an economical solution. We would seek additional funding from the agencies for this unique project, which is projected to cost around Rs 3.2 crore. Furthermore, we aim to develop an affordable solution at a commercial scale with the launch of this project".

Waste made of plastic and PET has a negative impact on human health and is a major cause of environmental pollution. Traditional chemical processes require high-purity recovered PET that is more expensive, less readily available, and process-intensive (e.g., temperature, catalysts, pressure). The enzyme degradation method, however, enables the selective conversion of impure PET streams to pure monomers. Existing enzymes can only degrade a small amount of PET and require high temperatures.

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Read online: https://nuffoodsspectrum.in/news/16/19825/quantumzyme-receives-funding-from-iisc-to-degrade-plastic-sustainably.html

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