HEALTHY NEWS

Carbios Is Changing the Recycling Game: Breaking Down Plastic Bottles Using Leaf Enzyme

By bestfolkmedicine · 13/10/2021 · 2 min read



In 2020, GNN reported that the French company Carbios had taken an enzyme from decomposing leaves and adapted it to be able to decompose plastic.

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Their hopeful project is already happening at the demonstration plant at Clermont-Ferrand. The company is presenting the recycling process and showing it can help achieve some major goals the company set 18 months ago.

Unfortunately, major issues have prevented humans from putting the plastic pollution problem under control. Could this method finally offer the solution?

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Carbios's Effort to Change the Recycling Game Using a Leaf Enzyme

Unfortunately, mechanical recycling is quite expensive and the demand for recycled plastic on the market is low. Believe it or not, plastic collection globally still runs at less than a quarter and a lot of plastic polyesters aren't recycled.

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This is where Carbios' tech could help: they believe their demonstration plant will attract the support of corporations like L'Oreal, Nestle, and PepsiCo.

At the plant, a reactor (approximately the size of a cargo van) processes approximately 100,000 ground-up plastic bottles or around two tons of ground-up PET-the most common type of plastic used for the production of plastic bottles.

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It dissolves the polymers (long complicated molecules), into monomers that are smaller and simpler blocks. This separates the two major components of polyethylene glycol from terephthalic acid in a period of 10 to 16 hours.

A major benefit of this enzymatic method over mechanical recycling is the end result. Plastic monomers are closer to what manufacturers begin with when they produce plastic from petroleum than when the plastic is bought chopped up.

However, the recycled plastic monomers cost close to double the production of plastic with virgin materials, but it's only 50 percent more expensive than mechanically-reduced plastic. It also lowers greenhouse emissions by 30 percent due to the decreased reliance on heavy industry.

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With the progress of enzymatic recycling as a tech, the chances of recycling more complex plastics like polypropylene or the ones in artificial clothing could eventually become reality.

Sources:

GOOD NEWS NETWORK

FORBES

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