



- Press Release -

Carbios launches industrial demonstration plant for its unique enzymatic recycling technology

- **Carbios has successfully launched its industrial demonstration plant in accordance with its timetable**
 - **First tests were successfully completed, reflecting the scalability of the process**
 - **Last stage before the commercialization of its ground-breaking technology, C-ZYME®**

Clermont-Ferrand, September 29th, 2021 (6:45 am CEST) - Carbios (Euronext Growth Paris: ALCRB), a company pioneering new enzymatic solutions to reinvent the lifecycle of plastic and textile polymers, announced the official opening and launch of an industrial demonstration plant operating with its enzymatic recycling technology, C-ZYME®, which was installed on the Cataroux site in Clermont-Ferrand.

"For more than 10 years, we have been creating innovative solutions to rethink the end of life of plastics and textiles," said Jean-Claude Lumaret, Carbios' Chief Executive Officer. "This industrial demonstration plant fulfills the promises of our enzymatic recycling process, C-ZYME®. The continuous cycle of recycling PET waste is one step closer to becoming a reality!"

The demonstration plant marks the culmination of the development of the C-ZYME® technology. It will allow the validation of the enzymatic PET recycling process' technical, environmental, and economic performance, as well as the design of future industrial units. By the end of 2022, its operation will enable the complete engineering documents for the process (Process Design Package) to be drawn up for the building and operation of a 40,000-tonne/year capacity reference unit as well as future factories to be run under licensing agreements.

"The demonstration plant includes a 20m³ depolymerization reactor capable of processing 2 tonnes of PET per cycle, which is the equivalent of 100,000 bottles. This is a watershed moment, highlighting how this revolutionary process works on a large scale," added Mr. Lumaret.

The optimization of the operating parameters as well as the production of the monomer batches are now carried out by a team of 10 people. An initial hydrolysis has been successfully realized, confirming the upscaling of the process.

The C-ZYME® recycling process uses an enzyme capable of depolymerizing PET (polyethylene terephthalate), which is found in a variety of plastic and textile items. The depolymerized monomers are purified before being repolymerized into PET of comparable quality to virgin PET derived from petrochemicals. Unlike traditional methods, Carbios' breakthrough enables unlimited recycling of all sorts of PET waste (clear, colored, opaque, complex plastics, polyester textiles) as well as the production of 100% recycled and 100% recyclable PET goods that maintain their virgin quality throughout the process.

About Carbios:

[Carbios](#), a green chemistry company, develops biological and innovative processes representing a major innovation in the end of life of plastics and textiles. Through its unique approach of combining enzymes and plastics, Carbios aims to address new consumer expectations and the challenges of a broader ecological transition by taking up a major challenge of our time: plastic and textile pollution.

Established in 2011 by [Truffle Capital](#), the mission of Carbios is to provide an industrial solution to the recycling of PET plastics and textiles (the dominant polymer in bottles, trays, textiles made of polyester). The enzymatic recycling technology developed by Carbios deconstructs any type of PET plastic waste into its basic components which can then be reused to produce new PET plastics of a quality equivalent to virgin ones. This PET innovation, the first of its kind in the world, was recently recognized in a scientific paper published in the prestigious journal [Nature](#). Additionally, Carbios is working hand in hand with multinational brands — like L'Oréal, Nestlé Waters, PepsiCo and Suntory Beverage & Food Europe — to implement its technology, and to lead the transition toward a truly circular economy.

The Company has also developed an enzymatic biodegradation technology for PLA (a bio sourced polymer) based single use plastics. This technology can create a new generation of plastics that are 100% compostable in domestic conditions, integrating enzymes at the heart of the plastic product. This disruptive innovation has been licensed to [Carbiolice](#), a joint venture created in 2016, which is now Carbios' subsidiary.

For more information, please visit www.carbios.com/en

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Carbios (ISIN FR0011648716/ALCRB) is eligible for the PEA-PME, a government program allowing French residents investing in SMEs to benefit from income tax rebates.

Carbios

Benjamin Audebert

Investor Relations

Agnès Mathé

Communication Department

contact@Carbios.fr

+33 (0)4 73 86 51 76

Media Relations (Europe)

Tilder

Marie-Virginie Klein

mv.klein@tilder.com

+33 (0)1 44 14 99 96

Media Relations (U.S.)

Rooney Partners

Kate L. Barrette

kbarrette@rooneypartners.com

+1 212 223 0561

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