

Compostable bioplastics biodegrade in real conditions, study confirms

GORINCHEM, The Netherlands, 19 June 2023 – Chaire CoPack, in partnership with AgroParisTech and the University of Montpellier, has conducted a scientific study that validates the biodegradation of certified compostable food contact packaging in industrial composting facilities. The preliminary report of this study provides conclusive evidence that certified compostable packaging is a viable sustainable solution to waste management in the food packaging industry.

The composting test used 20 tons of food- and bio-waste collected from households, along with 323 kg of assorted certified compostable packaging. In parallel, a 'control' compost test was conducted with no packaging added.

"We are thrilled to see the findings of this study," said Paolo La Scola, the Public Affairs Manager at TotalEnergies Corbion. "The results send a strong signal to governments across Europe to grant certified compostable plastics access to biowaste collection and composting infrastructure. It's necessary to reduce plastic waste mismanagement."



The start of the test (left): certified compostable shopping bags, trays, coffee capsules and films are mixed with organic waste at the. After composting (on the right side) compostable plastics are disintegrated and

The research, carried out over a four-month period from October 2022 to February 2023, took place with real industrial composting conditions without forced aeration. Researchers from the University of Montpellier and AgroParisTech monitored the study in collaboration with the industrial composting platform of the Syndicat de Centre Hérault in Aspiran.

The study examined commercially available food packaging representative of the European market such as compostable bags, film, food trays, and coffee pods composed of different resins certified for industrial



composting (EN 13432) or home composting (NF T51-800). These products were made from biodegradable and compostable resins like PLA, PBAT, and complexed starch sourced from members of the French Association of Biobased Compostables, including Novamont and TotalEnergies Corbion.

Regular checks and samples were taken during the composting process. The results of this test showed:

- That the addition of certified compostable packaging:
 - Positively affected the composting yield,
 - Did not have any negative consequences on the agronomic quality of the final compost,
 - Did not generate ecotoxicity to higher plants, earthworms, and daphnia,
 - All tested materials fully met the decay rate requirements of the compostability standards.

- That, regarding the fate of residual compostable microfragments in the soil:
 - Immediate further biodegradation of these fragments was demonstrated,
 - The rate of biodegradation increased as the fragments spent more time in the compost.

“These findings are one of many reports, such as the [2020 study by Wageningen University](#), that proves that compostable packaging is an essential tool for increasing the collection of food waste and enabling its efficient conversion into compost,” La Scola continues. “It is essential that all stakeholders along the value chain cooperate for the recognition of the benefits of compostable packaging in separate collection and recycling of food waste.”

The report is currently under review. To see the preliminary report, [click here](#).

END PRESS RELEASE

For more information please contact:

Rui Veras

Marketing Communications Manager

M +31 629 055 522

E rui.veras@totalenergies-corbion.com

Francois de Bie

Vice President Global Marketing

M +31 611 716 895

E francois.debie@totalenergies-corbion.com

TotalEnergies Corbion

Stadhuisplein 70 • 4203 NS • Gorinchem • P.O. Box 2025 • 4200 BA • Gorinchem • The Netherlands

T +31 183 695 695 • **F** +31 183 695 602 • **E** pla@totalenergies-corbion.com



About TotalEnergies Corbion

TotalEnergies Corbion is a global technology leader in Poly Lactic Acid (PLA) and lactide monomers. PLA is a biobased and biodegradable polymer made from annually renewable resources, offering a reduced carbon footprint versus traditional plastics. The Luminy® PLA portfolio, which includes both high heat and standard PLA grades, is an innovative material that is used in a wide range of markets from packaging to consumer goods, fibers and automotive. TotalEnergies Corbion, headquartered in the Netherlands, operates a 75,000 tons per year PLA production facility in Rayong, Thailand. The company is a 50/50 joint venture between TotalEnergies and Corbion. www.totalenergies-corbion.com

About TotalEnergies

TotalEnergies is a global multi-energy company that produces and markets energies on a global scale: oil and biofuels, natural gas and green gases, renewables and electricity. Our 105,000 employees are committed to energy that is ever more affordable, cleaner, more reliable and accessible to as many people as possible. Active in more than 130 countries, TotalEnergies puts sustainable development in all its dimensions at the heart of its projects and operations to contribute to the well-being of people. www.totalenergies.com

About Corbion

Corbion is a sustainable ingredients company dedicated to preserving what matters, including food and food production, health, and the planet. We specialize in lactic acid, lactic acid derivatives, food preservation solutions, functional blends, and algae ingredients, using our deep application and product knowledge to propel nature's ingenuity through science. With more than a century of experience, we continue working side-by-side with our customers to make our cutting-edge technologies work for them. Leveraging our advanced capabilities in fermentation and preservation technology, we help customers differentiate their products in diverse markets ranging from food and animal nutrition to home & personal care, pharmaceuticals, electronics, medical devices, and bioplastics. In 2022, Corbion generated annual sales of €1,457.9 million with a workforce of 2,601 FTEs. Corbion is listed on Euronext Amsterdam. For more information: www.corbion.com

TotalEnergies Corbion

Stadhuisplein 70 • 4203 NS • Gorinchem • P.O. Box 2025 • 4200 BA • Gorinchem • The Netherlands
T +31 183 695 695 • F +31 183 695 602 • E pla@totalenergies-corbion.com