

Carbiolice announces the "OK Compost HOME" certification of PLA* (plant-based plastic) rigid packaging containing Evanesto®.

- Carbiolice has developed an enzymatic additive, called Evanesto®, which makes PLA (polylactic acid) compostable under domestic conditions.
- After flexible plastic packaging (food films, lids, ...) ¹, it is now the time for rigid plastic packaging (up to 450 µm) containing 70% PLA and the Evanesto® additive to obtain the "OK compost HOME" certification.
- By integrating 5% of the Evanesto® enzymatic additive, yoghurt pots, trays, cups, horticultural pots, etc. can now biodegrade completely in a domestic composter in 255 days, without residue or toxicity, even at room temperature.

Evanesto®, the first additive to enable PLA-rich plastics to achieve "OK compost HOME" certification.

Carbiolice has developed an enzymatic additive which, when added during traditional transformation processes, makes PLA compostable under domestic conditions. PLA is a bioplastic that has the advantage of being both biosourced and biodegradable, however its compostability was previously limited to industrial conditions (high and constant temperatures).

In November 2020, Carbiolice had validated a first step by receiving the "OK compost HOME" certification by the TÜV AUSTRIA Group, for flexible plastic packaging (single-layer films with a maximum thickness of 60 µm and multi-layer films with a maximum thickness of 30 µm), containing 33% PLA, 62% PBAT** and incorporating 5% Evanesto®.

Rigid packaging containing Evanesto® turns into compost within 255 days, even at room temperature and therefore in domestic conditions.

Carbiolice now obtains a new "OK Compost HOME" certification, this time for thicker packaging (up to 450 µm in monolayers), and with a higher PLA content (70%). This new milestone allows everyday packaging (yoghurt pots, trays, cups, but also horticultural pots, etc.) to obtain the "OK Compost HOME" certification. The close collaboration between TÜV AUSTRIA and Carbiolice will enable packaging manufacturers to facilitate their own certification process when their products contain Evanesto®.



This innovation offers the possibility to consider a respectful end-of-life of packaging within the whole composting chain. It is an additional tool in the eco-design strategy for plastic packaging. It will enable food manufacturers to reduce the environmental impact of plastics that cannot be recycled because they are too thin, too complex or soiled by food.

"Carbiolice proves through this new certification that by combining enzymology and plastics processing, it is possible to better control the end of life of plastics. Our Group is fully committed to this circular economy approach and to the positive recovery of plastic packaging. Our innovative biotechnological processes, based on the use of enzymes, make it possible to rethink the end-of-life of plastic and textile

¹ Refer to the 1 December 2020 press release



polymers. Concrete solutions that will enable brands and manufacturers to reduce their environmental impact. Jean-Claude Lumaret, President of Carbiolice

*PLA-based: short for polylactic acid, a plastic made from corn or sugar cane

**PBAT (short for PolyButyrate Adipate Terephthalate): a biodegradable and compostable polymer with properties similar to low density polyethylene (LDPE).

About Carbiolice

Carbiolice, an innovative French company and a wholly-owned subsidiary of Carbios, was created in 2016 to develop a new 100% compostable and 100% biodegradable bioplastics chain.

In close collaboration with Carbios and the world leader in enzyme production, Novozymes, Carbiolice, has developed a first enzymatic additive: Evanesto®. When added to the manufacture of PLA-based plastic packaging (of vegetable origin), it makes it 100% compostable, even under domestic conditions.

Based on nearly 10 years of R&D in collaboration with Carbios and the Toulouse laboratory TBI (Toulouse Biotechnology Institute), Carbiolice has succeeded in making this technological challenge an industrial reality. The Evanesto® additive is simply added during traditional plastic transformation processes and can be integrated during the flexible or rigid food packaging manufacture.

This innovation was recognised in early 2021 as one of the 1,000 solutions to change the world by the Solar Impulse Foundation. It has also just been awarded the Greentech Innovation label by the Ministry of Ecological Transition.

For more information: www.carbiolice.com

About TÜV AUSTRIA Group

TÜV AUSTRIA Group is the largest independent testing, inspection and certification company in Austria. Founded in 1872, the company stands for quality and transparency. All of the Group's worldwide revenues are invested in supporting innovation and training in the interests of quality, safety and environmental protection.

The TÜV AUSTRIA Group is an international company with branches in more than 40 countries, more than 2,000 employees and a turnover of 200 million euros.

About Carbios

Carbios, a green chemistry company, is developing innovative and competitive biological processes with a view to their industrialisation, representing a major innovation in the life cycle of plastics and textiles. Through its innovative approach, which for the first time brings together the worlds of enzymology and plastics processing, Carbios aims to meet the new societal expectations of consumers and the challenges of the ecological transition by tackling a major challenge of our time: plastic and textile pollution.

Founded in 2011 by Truffle Capital, the company's mission is to provide an industrial response to the recycling of PET-based plastics and textiles (the main polymer in polyester bottles, trays and textiles) and to the biodegradation of PLA through its subsidiary Carbiolice. The enzymatic recycling technology developed by Carbios deconstructs any type of PET waste into its basic constituents, which can then be reused to produce new PET products of equivalent quality to virgin PET. This world first was hailed in April 2020 by the international scientific community through a front page publication in the prestigious journal Nature. To support the acceleration of this project, Carbios also relies on a Consortium including L'Oréal, Nestlé Waters, PepsiCo and Suntory Beverage & Food Europe.

For more information: <https://www.carbios.com/en/>

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