



## CARBIOS and Selenis announce strategic partnership to produce PETG issued from CARBIOS' biorecycling technology for Cosmetic and Healthcare markets

**Clermont-Ferrand (France), Tuesday 24 September 2024 (6pm CEST).** - CARBIOS, (Euronext Growth Paris : ALCRB), a pioneer in the development and industrialization of biological technologies to reinvent the life cycle of plastic and textiles, and SELENIS, a leading supplier of high-quality specialty polyester solutions, have signed a Letter of Intent (LOI) to cooperate in the production of PETG<sup>1</sup>. By leveraging CARBIOS' unique enzymatic depolymerization technology and Selenis' expertise in polymerization, the companies aim to develop a premium, sustainable PETG material made from PET waste for the Cosmetic and Healthcare packaging sectors across Europe and the U.S. This partnership follows a two-year collaboration between the two companies and represents a significant advancement in the plastic recycling industry.

PETG is an indispensable packaging material in both the cosmetics and healthcare industries due to its exceptional clarity, durability, mechanical and chemical resistance. CARBIOS' enzymatic depolymerization solution breaks down all types of PET waste into PTA<sup>2</sup> and MEG<sup>3</sup> monomers, which are then transformed into PETG through Selenis' advanced polymerization processes. Thanks to the purity of these monomers, PETG issued from biorecycling presents the exact same properties as virgin PETG, allowing for products packaged in thick, molded pots and lids to be protected and presented attractively. In the medical and pharmaceutical industries, PETG properties



*Figure 1: MEG monomer from CARBIOS' PET biorecycling process*



*Figure 2: PTA monomer from CARBIOS' PET biorecycling process*

are also critical for guaranteeing top packaging performance, sterility, transparency and optical brightness, making it an ideal choice for complex medical device packaging, pharmaceuticals blisters, or any other packaging of diagnostic equipment. The material's value is therefore further underscored by combining a sustainable recycling solution whilst guaranteeing all needed properties, aligning with consumer sustainability demands and stringent regulatory requirements.

CARBIOS and Selenis' partnership is the result of extensive pilot and industrial polymerization trials that have refined the quality of the end product. The result is high-specialty PETG grades issued

<sup>1</sup> Polyethylene terephthalate glycol

<sup>2</sup> purified terephthalic acid

<sup>3</sup> monoethylene glycol

from biorecycling that meet the strict requirements of sectors like cosmetics and healthcare, where Selenis has a strong presence through its Selcare brand.

**Emmanuel Ladent, CEO, CARBIOS:** *“CARBIOS and Selenis have a long collaboration, and we are pleased to build on this established relationship to produce PETG issued from CARBIOS’ unique biorecycling technology. This high-specialty, premium material meets demanding quality requirements whilst also contributing to the transition to more sustainable packaging materials. The partnership will open new markets for CARBIOS, notably the healthcare sector, as we continue our worldwide commercial deployment.”*



Figure 3: aerial view of Selenis’ industrial plant in Portalegre, Portugal

**Eduardo Santos, Head of Corporate Strategy at Selenis:** *“This collaboration marks an exciting step in our mission to drive sustainability in the polymerization industry. By combining our 65 years of expertise with CARBIOS’ pioneering biorecycling technology that ensures high-quality monomers for the production of virgin-like PETG, we are advancing in the development of sustainable materials to meet the growing demand for environmentally responsible solutions in the cosmetic and healthcare sectors. Together, we have the potential to reshape the future of sustainable plastics.”*

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**About CARBIOS:**

CARBIOS is a biotech company developing and industrializing biological solutions to reinvent the life cycle of plastic and textiles. Inspired by nature, CARBIOS develops enzyme-based processes to break down plastic with a mission to avoid plastic and textile pollution, and accelerate the transition to a circular economy. Its two disruptive technologies for the biorecycling of PET and the biodegradation of PLA are reaching industrial and commercial scale. Its biorecycling demonstration plant has been operational since 2021 and a first industrial plant, in partnership with Indorama Ventures, is currently under construction. CARBIOS, founded in 2011 by Truffle Capital, has received scientific recognition, notably with the cover of Nature, and is supported by prestigious brands in the cosmetics, Food & Beverage and apparel industries to enhance their products’ recyclability and circularity. Nestlé Waters, PepsiCo and Suntory Beverage & Food Europe are members of a packaging consortium founded by CARBIOS and L’Oréal. On, Patagonia, PUMA, PVH Corp. and Salomon collaborate with CARBIOS in a textile consortium.

Visit [www.carbios.com/en](http://www.carbios.com/en) to find out more about biotechnology powering plastic and textile circularity.

For latest news and media assets, visit our newsroom: [www.carbios.com/newsroom/en/](http://www.carbios.com/newsroom/en/)

LinkedIn: [CARBIOS](https://www.linkedin.com/company/carbios) / Instagram: [insidecarbios](https://www.instagram.com/insidecarbios)

**Information on CARBIOS shares:**



- ISIN Code:** FR0011648716
- Ticker Code:** Euronext Growth: ALCRB
- LEI:** 969500M2RCIWO4NO5F08

CARBIOS is eligible for the PEA-PME, a government program allowing French residents investing in SMEs to benefit from income tax rebates.

## About Selenis

Selenis is a supplier of high quality and innovative specialty polyester solutions for diverse applications. Their mission relies on employing their profound knowledge of polymers, formulations, and processing, in partnership with their clients to develop future-fit solutions and commit to create opportunities.

Selenis is a global business with production sites in Portugal, Italy and the USA. Their production facilities have batch and continuous SSP units, permitting the production of a wide range of polymers to meet highly technical markets. Their production configurations provides Selenis the flexibility to produce both amorphous and crystallised products.

Committed to playing a role in society's collective response to the plastic waste challenge, Selenis creates partnerships across the value chain to create long term solutions. Highly focused on sustainability, Selenis centers their innovation in developing resins with up to 50% recycled content and solutions that are fully recyclable in the PET stream. Their progress in molecular recycling turns waste into the building blocks of their specialty resins, contributing to the fight against climate change.

Selenis and their sister company, Evertis, are members of the IMG group, an international business headquartered in Portugal with operations around the world. Our businesses have been pioneers in the polyester industry since 1959. To discover more, please visit our website at [www.selenis.com](http://www.selenis.com)

Follow Selenis on LinkedIn

## About Selcare

Selcare is a brand of Selenis, producer of specialty resins for a diverse range of medical applications.

Selenis is a member of the IMG Group, present in the polymers market since 1959. Selenis aspires to improve patient safety with solutions specifically developed for the medical value chain.

Our Selcare brand offers high performing medical grade plastics and a wide range of supporting services.

### For additional information, please contact:

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