Paques Biomaterials is revolutionizing plastics with Natural PHAs

In the evolving landscape of the plastics industry, the demand for sustainable, highperformance materials has never been greater. Enter **natural PHAs** (polyhydroxyalkanoates) — a groundbreaking class of biopolymers derived from renewable resources and produced by microbial fermentation. These versatile, biobased and biodegradable plastics offer a powerful alternative to conventional petrochemical-based materials, when this having functional benefits or is legally required.

Paques Biomaterials is a startup producing natural PHAs from organic side streams. As a world first, this Dutch startup developed two technologies (fermentation and extraction), using non-GMO fermentation to create a high-quality biopolymer from secondary feedstock with tunable properties and natural biodegradability in all environments without leaving <u>persistent</u> microplastics behind.

Natural PHAs can be considered as **alternative for a wide range of fossil-based plastics**, including polypropylene (PP), polyethylene (PE), polystyrene (PS), and polyesters (PET) — in relevant applications like packaging, agriculture, consumer products, and more. Unlike their petrochemical counterparts, PHAs are fully biodegradable in both industrial and home composting conditions, in soil, in aquatic conditions, and in anaerobic digestion plants without creating persistent microplastics.

From single-use items to durable goods, PHAs meet the rising demand for eco-conscious materials while maintaining strength, flexibility, and processability. They are an ideal solution for manufacturers looking to reduce their environmental impact and align with global sustainability goals.

Paques Biomaterials' application development team collaborates with R&D departments or product designers to incorporate natural PHAs, as a building block in their circular and biobased products.

Join the movement toward a greener, more resilient plastics economy. With natural PHAs, the future of sustainable materials is not just possible — **it's already here**.

