



Biophelion

Biophelion GmbH

Many Molecules. One living process.

Biophelion grows specialty ingredients by fermentation, replacing resource-depleting extraction and fossil-based synthesis with a single microbial platform fed by renewable feedstock and, increasingly, industrial side streams. From one fermentation chain the company produces, in sequence, a biosurfactant (T³-Tensid) and two aroma lactones for food flavour, Massoia Lactone and Delta-Decalactone. The molecules are chemically identical to their extracted or synthesised counterparts, but are made under controlled conditions in Germany, with defined inputs and reproducible output, and without felling a forest or drilling for oil. Founded in 2025 as a spin-out of the Leibniz-HKI in Jena and supported by SPRIND, Biophelion offers a renewable-carbon route to specialty ingredients across food, agriculture and personal care.

One fermentation chain. Four end markets.

Biophelion's fermentation platform spans four end-market sectors. In food & flavour, Massoia Lactone (coconut/creamy) and Delta-Decalactone (dairy/butter/fruit) are drop-in replacements for bark-extracted or synthetically derived aroma chemicals, fully compliant with EU FLAVIS and FEMA regulations. In personal care & cosmetics, T³-Tensid functions as a biosurfactant for hair cleansing and preservation systems, outperforming rhamnolipids, sophorolipids and SLS at low active concentrations. In agriculture, the biosurfactant is being co-developed as a crop adjuvant in a partnership. In industrial & cleaning applications, T³-Tensid is under evaluation for hard-surface cleaning, institutional & industrial (I&I) use, and water treatment. Across all sectors, Biophelion pursues a Joint Development Agreement (JDA) model for early-stage applications: partners fund formulation and application testing; Biophelion supplies material and retains production process IP.

Rooted in science, connected in the ecosystem.

Biophelion GmbH is a spin-out of the **Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute (Leibniz-HKI)** in Jena, where co-founders Lars Regestein and Till Tiso developed the fermentation platform, with additional research conducted at **RWTH Aachen**. The company was founded with the support of **SPRIND** (Federal Agency for Disruptive Innovation), which validated the underlying science prior to incorporation. Biophelion is a member of the **Cluster Industrial Biotechnology (CIb)** and has been accepted into the **Chemstars** programme.

BIOPHELION GMBH

Foundation

July 2025

Employees

9

Key topics

- bio-based chemicals
- fermentation
- biosurfactants/surfactants
- flavours & aroma chemicals
- food ingredients
- side-stream / residue valorisation

Key services

- fermentation-derived specialty chemicals produced under
 - ✓ controlled conditions,
 - ✓ from renewable feedstock
 - ✓ with defined inputs and
 - ✓ reproducible output
- Joined Application Development

Products

- Massoia Lactone / ML (C10 food-flavour lactone, samples available)
- Delta-Decalactone / DL (dairy/butter/fruit lactone, in development)
- T³-Tensid (biosurfactant, application collaboration, samples available)



CONTACT

Biophelion GmbH

Winzerlaer Straße 2

07745 Jena

Germany

Phone: +49 172 4872528

www.biophelion.com

Contact Person



Felix Kasper

Head of Commercialization

felix.kasper@biophelion.de