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WHAT IS BIOLAMER



BioLaMer, an EIC Pathfinder Open project aims to tackle the challenges posed by food waste and petrochemical plastics by introducing new value chains starting from food waste through the demonstration of three biorefinery processes, and value-added bio-composites and bioplastic products.



TRANSFORMING FOOD WASTE INTO ECO-FRIENDLY BIOPOLYMERS



IN A NUTSHELL

BioLaMer project endeavours to demonstrate an innovative fly larvae biorefinery concept in addressing food waste and petrochemical plastic problems. BioLaMer utilizes food-consuming black soldier fly larvae (*Hermetia illucens*) as a valuable feedstock for the production of two biopolymers, polyhydroxyalkanoates (PHA), and chitosan, as well as value-added bioplastics from them.

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However, the views and opinions expressed are solely those of the authors. Neither the European Union nor European Innovation Council and SMEs Executive Agency can be held responsible for them.

VISION & MISSION

BioLaMer's vision and mission are in line with the EU circular economy and Sustainable Development Goals (SDGs), supporting the Green Deal. We work towards reducing food waste and plastic pollution, aiming for zero waste and lower carbon emissions.

THE CHALLENGES & BIOLAMER SOLUTION

- Consumer food waste poses significant environmental, health, social, economic, and ethical concerns via GHG emission and pollution of soil and water bodies.
- Petrochemical plastics, being non-degradable, accumulate in land, soil, and water systems, persisting for generations and causing widespread ecosystem pollution.

By demonstrating innovative technologies and new value chains starting from food waste, BioLaMer project aims to reduce food waste and petrochemical plastics related environmental concerns.

PARTNERS



WHAT'S NEW?

We demonstrate the impact of cultivating black soldier fly larvae using low-grade food waste to generate biopolymers and value-added bioproducts. BioLaMer integrates bioreactor process expertise to create economically robust technologies for the production of PHA and chitosan, which will be backed by Life Cycle Thinking/Assessment and hybrid models developed through machine learning platform.

POSITIVE IMPACTS

- The major advantage of the larvae route are:
- the feedstock is renewable & inexpensive
 - mitigate food waste related environmental problem
 - provide less PHA production complexity as the larvae have almost invariable chemical composition
 - doesn't disturb the biodiversity
 - can avoid/reduce pre-treatment costs that are associated with other waste-streams to produce the platform chemicals for biopolymer production

Scan to dive deeper into our project's journey



<https://biolamer.eu/>

