We have 30 years of experience helping companies in the sector, including manufacturers of raw material, processors and the end users. AIMPLAS has the most comprehensive resources, with over 10,500 m², to address technical analysis and testing as well as R&D projects related plastics. We also have more than 30 pilot plants with different processes for plastic processing and our laboratories are internationally accredited according to ISO/IEC 17025.

Every year more than 250 enterprises trust in us to manage their R&D projects. These companies find in AIMPLAS a partner for the necessary technological support in the development of the new products, the improvement of the properties of a new material, the optimization of their transformation processes or the assessment of waste materials.

AIMPLAS has over 20 years of experience in bioplastics. This research line has two main areas:

1. Plastics are reinforcements from natural renewable sources, such as flax, jute, hemp, agricultural waste, and cellulose, as well as bioplastics synthesized by biotechnology from biomonomers.
2. Biodegradable plastics from fossil or non-renewable sources.

AIMPLAS has completed over 150 R&D&I biopolymer and biocomposite projects since 1997. This track record as experts in the field places us at the forefront of development of new, more eco-friendly materials and products. Some of our most important research lines are:

- Developments in PHB.
- Projects related to obtaining PLA packages.
- Developments using natural fibres.
- Development of biodegradable and compostable materials for agriculture.
- Flame-retardant bioplastics.
- High added-value products from vegetable, industrial and municipal solid waste.
- Biocomposites that can be recycled.
- Biofabrics for clothes.
- Biocomposites with advanced properties for construction and transport.
- Development of PVOH grades that are more cost-efficient than EVOH.
- Biocomposites from resins obtained from renewable sources.

Business opportunities

- Increased thermal resistance of plastic materials through reactive extrusion
- Developing PVOH grades suitable for extrusion and injection to develop barrier packaging
- Eliminating volatile compounds and contaminants using SC-CO₂ and an extraction system
- Starch film with a higher amount of native starch than commercial grades
- Compostable nets and twines
- Cellulose-fibre composites with advanced properties (foaming, flame-retardant, biodegradable, antimicrobial, etc.)
- Natural fibre-reinforced Polypropylene (PP)
- Compounding technologies to obtain customised biodegradable materials
- Biocomposites from glass fibres and resins from renewable sources
Projects undertaken

PLA packaging projects
- PLA4FOOD
- BIOBOTTLE
- BIO4MAP
- BIOTUBO
- BIOPFARM
- PLAPACK

Agricultural projects
- PICUS
- ECOBIONET
- HYDRUS
- DRIUS

Developments with natural fibres
- ECOPLAST
- NATURTRUCK
- BIOSTRUCT
- NATEX

Fire-retardant bioplastics
- BIOFOC
- CAYLEY

PHB developments
- PHBOTTLE
- BUGWORKERS
- BRIGIT
- WHEYPACK

Biomaterials in medicine
- MRFID
- AEROINJECT GRO
- POLIMAB-RP
- OXIMETRO
Analyses and Tests

Bioplastic and/or compostable materials and products manufactured with bioplastics must be tested to determine and ensure their biodegradability in certain test media, such as compost, soil, aqueous media and marine environments, and to meet the specifications that will help position the products on the market.

The biodegradation tests in compost and soil, and plastic disintegration tests carried out in our laboratories are accredited by ENAC (Spanish National Accreditation Body).

**Aerobic biodegradability**

In AIMPLAS, we can determine aerobic biodegradability under different conditions and test media according to the following test standards:

- Controlled composting conditions: UNE-EN ISO 14855 (part 1 and 2). Part 1 of the standard is a test accredited by ENAC (Spanish national accreditation body).
- Soil: UNE-EN ISO 17556. This test is accredited by ENAC.
- Aqueous medium: UNE-EN ISO 14852.

**Anaerobic biodegradability**

We can also determine anaerobic biodegradability under different conditions and test systems according to the following test standards:

- Liquid: UNE-EN ISO 14853.
- High salid content: UNE-EN ISO 15985.

**Degree of disintegration**

In AIMPLAS, we can also establish the degree of disintegration of plastic materials under composting conditions simulated in a laboratory test. The test standard is UNE-EN ISO 20200.

Should you require tailor-made tests, please do not hesitate to contact us.

Training and Events

We organise key conferences and seminars for the plastic industry

Awards and Recognition

- BIOVEGE: Bio-based Material 2018
- BREAD4PLA: go!ODS 2018
- BREAD4PLA: Green Awards 2017
- POLYMIX: LIFE Citizens’ Award 2015