

- [Home](#)
- [News & Events](#)
- [Careers](#)
- [Contact](#)

- [NL](#)
- [FR](#)
- [EN](#)
- [DE](#)
- [ES](#)

SEARCH
<input type="text" value="SEARCH"/>
<input type="button" value="SEARCH"/>



## Lab & Consulting Services

- [Introduction](#)
- [Divisions](#)
- [Accreditations](#)
- [Memberships](#)
- [European Projects](#)
- [Publications](#)
  
- [BIOBOTTLE](#)
- [Drius](#)
- [Fertiplus](#)
- [KBBPPS](#)
- [Oli-PHA](#)
- [Open-Bio](#)
- [Splash](#)
- [Synpol](#)
- [Transbio](#)
- [Previous](#)

# BIOBOTTLE

# BIOBOTTLE

## **Biodegradable solutions for packaging of liquid dairy products**

### **Term**

May 1<sup>st</sup>, 2014 – April 30<sup>th</sup>, 2016

### **Project**

This research proposal intends to develop innovative plastic bottles and bags manufactured in biodegradable materials that fulfil the requirements for packaging of different types of dairy products. One of the main drawbacks for the wide application of biodegradable materials currently available on the market in certain applications is their thermal resistance, in comparison with traditional plastics such as high density polyethylene. Biodegradable materials show a limited range of temperatures of use, up to 50-60°C depending on their composition. Plastic bottles and bags intended for packaging of dairy products are subjected to medium-high temperature during sterilization and transportation, and therefore thermal stability of the material is a major drawback of biodegradable resins to be introduced into this wide market.

To overcome these limitations the use of reactive extrusion is proposed. The process essentially forms chemical bonds between the polymer chains resulting in a dense network of very high molecular weight. This polymer becomes less mobile when subjected to heat or mechanical loads, and with this, properties such as heat distortion, ESCR, creep and abrasion resistance are enhanced. The main challenge in this project will be modifying the chemical structure of the biodegradable materials to increase thermal resistance without decreasing their mechanical resistance and their biodegradability properties for plastic bottles and pouches for the packaging of different types of dairy products.

### **Coordinator**

AIMPLAS (Spain)

### **Partners**

AIMPLAS (Spain), ALJUAN (Spain), ALMUPLAS (Spain), Consiglio Nazionale delle Ricerche (Italy), ESPAÇOPLAS (Portugal), VIZELPAS (Portugal), VLB Berlin (Germany) and OWS (Belgium)

### **OWS' tasks**

Biodegradability/compostability testing & LCA

## Dissemination

- [Introductory article](#)

## Links

- [www.biobottleproject.eu](http://www.biobottleproject.eu)

## Contact

Mr. Steven Verstichel  
E-mail: [steven.verstichel@ows.be](mailto:steven.verstichel@ows.be)

---

### OWS

- [About OWS](#)
- [25 Years OWS](#)
- [Press](#)

### Biogas Plants

- Household waste
  - [DRANCO](#)
  - [SORDISEP](#)
- Organic Feedstock
  - [DRANCO-FARM](#)
  - [BES – Plugflow](#)
  - [BES – CSTR](#)

### Lab & Consulting Services

- [Biodegradability, Compostability & Ecotoxicity \(BCE\)](#)
- [Biogas Consulting & Support \(BCS\)](#)
- [Auditing, Controlling & Sorting \(ACS\)](#)
- [Sustainability Assessment & Compensation Services \(SACS\)](#)

- [Disclaimer](#)
- [Sitemap](#)
- [Contact](#)

Copyright 2013 OWS

Created with care by [De Facto Image Building](#) With the support of [FIT](#)

