CLIPSE

RENEWABLE ECO-FRIENDLY
POLY(LACTIC ACID) NANOCOMPOSITES
FROM WASTE SOURCES

Biopac Introduction

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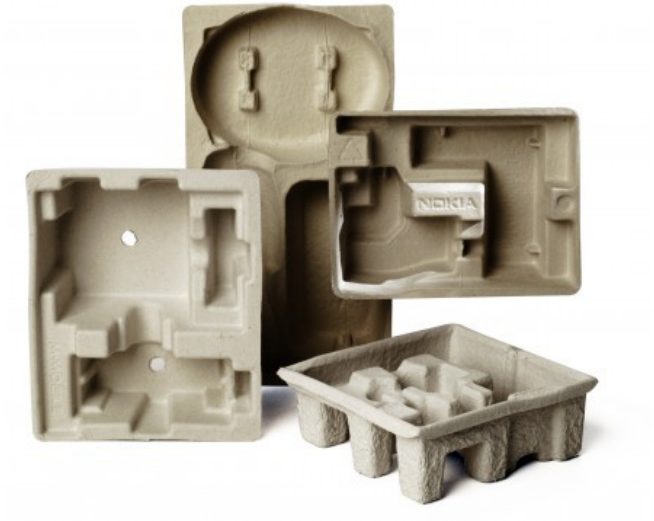
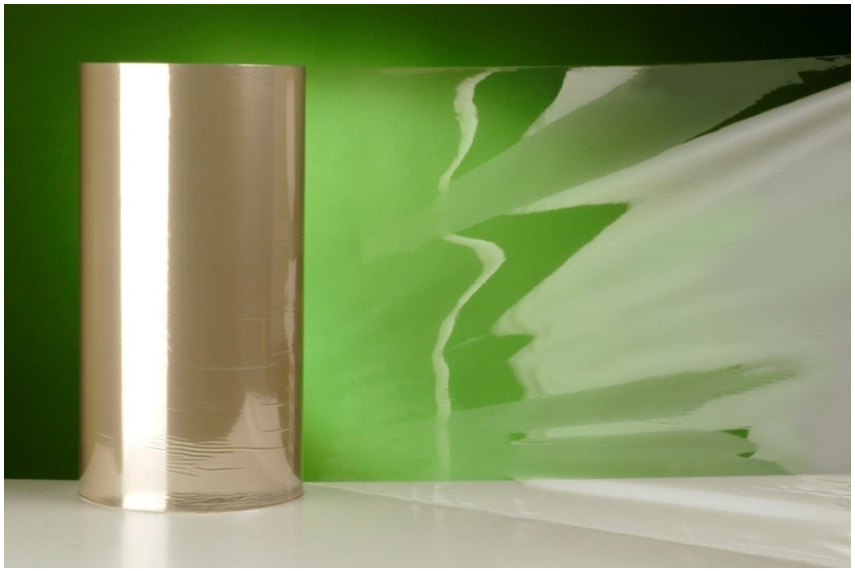
Biopac Background

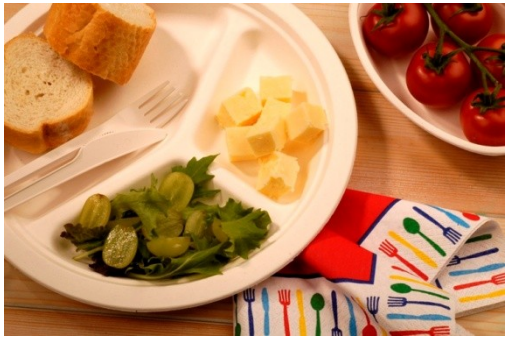
•Biopac founded in 2002 is an SME based in the UK

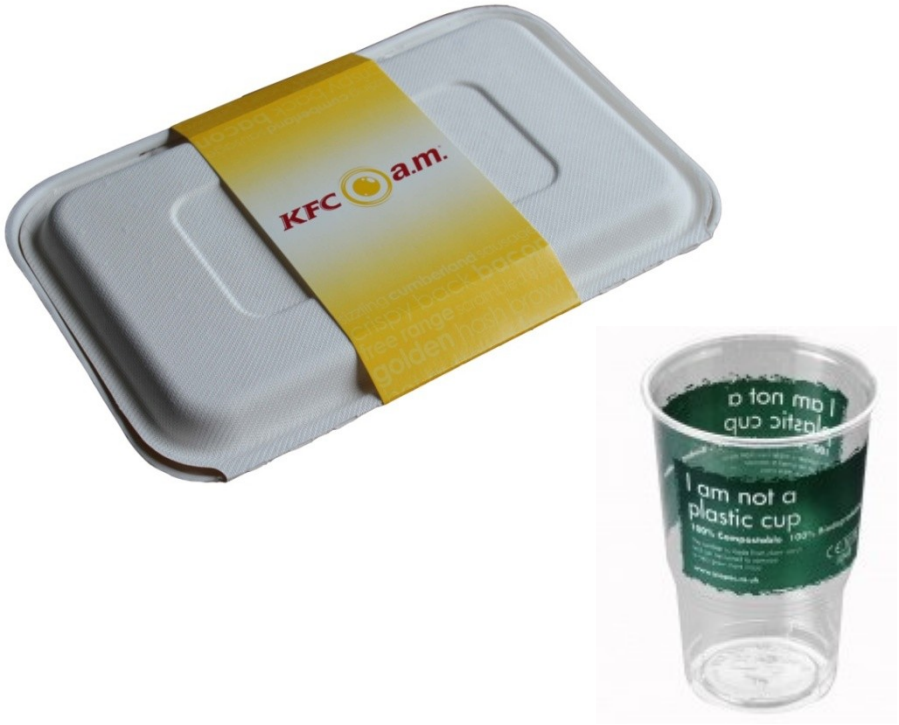
• Our business is the development, manufacture and distribution of environmentally friendly packaging solutions.





Who are we?





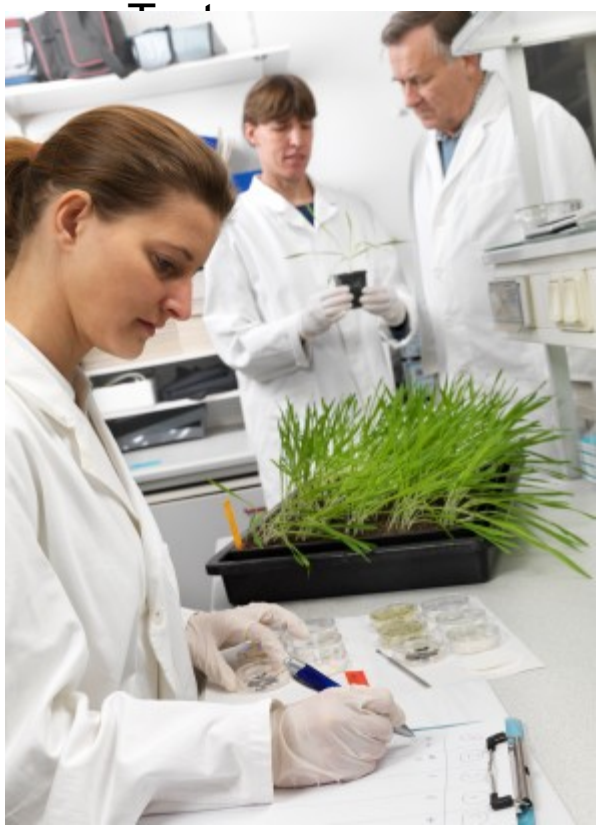
•Biopac is an independent sustainable packaging design, development and supply Company which specialises in sustainable and environmentally friendly packaging solutions.

•Biopac's mission is to establish high performance alternatives to oil based and unsustainable materials by researching and developing new materials, finding renewable feedstocks and using novel technologies.

Biopac Project Objectives

- Access to flexible sustainable technology for packaging
- Solutions and materials from sustainable and environmentally friendly feedstock that are compostable and biodegradable
- Solutions that are commercially viable to produce.
- Solutions that are financially viable (have a business case for widespread adoption)
- Solutions that are attractive to all stakeholders – end users, manufacturers, retailers, regulators, managers of waste disposal etc

Fit with R&D Strategy



•To develop locally sourced (EU) environmentally friendly materials to reduce dependency on the Far East and other supply sources

•To own/have access to Intellectual Property to reduce dependency on bought in products. A fundamental cornerstone of growth plans.

• A focus on the use of waste products (particularly food waste) as a source of feedstocks for new materials

Biopac Commercialisation

SEVENTH FRAMEWORK PROGRAMME

Exploitation and Commercialisation Role

Biopac Commercialisation

The Exploitation Manager (Biopac) :

- **technological and commercial collaboration**
- **and licensing of the technology** (outside the consortium)

Exploitation activities and plan:

- **Website and Communication**
- **Publishable Results**
- **An overview of the Results' Exploitation and Use Potential**
- **Measures for the Exploitation of the Knowledge and Results**
- **Exploitation Strategy**
- **Exploitation Agreement**
- **Exploitation rights**
- **Plans for the Management of Knowledge and Intellectual Property** (patents, copyrights, trademarks)
- **Business Plan – Joint Ventures, Funding**

Previous Project Experience

PLA-FOAM

•Funded under 7th FWP (Seventh Framework Programme)
•Research area: SME-1 Co-operative Research (all areas of science

•The Development of a Single-Screw Extrusion Process for Production of Low Density Biodegradable PLA Foam for Thermoformed Food Packaging Applications (PLA-FOAM)

BREW-PACK

•Multi-layer biopolymer films demonstrating selective gas barrier and functional properties suitable for high performance food packaging, derived from integrated bio-refining of sustainable biomass (brewers spent grain)

Previous Project Experience

ISA-PACK

A Flexible Sustainable Active and Intelligent Packaging Technology Platform Enabling Enhanced Shelf Life, Quality and Safety of Fresh Food Produce

- To develop novel materials derived from microbial fermentation of sustainable feedstocks
- For high performance gas barrier and stretch film packaging applications;
- To demonstrating extended food shelf life and quality and improved safety;
- To develop an accurate, tuneable and reliable intelligent indicator system
- Through extension of shelf life the ISA-Pack seeks to reduce retailer supply chain wastage of fresh food produce by 75%.