BIO4MAP - GA 606144

Project presentation

Transparent and high barrier biodegradable film and sheet for customised Modified Atmosphere Food Packaging

www.bio4map.eu
bio4map@aimplas.es

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration.

Updated May 2014

BIO4MAP general presentation

- **BIO4MAP** factsheet – project information
- BIO4MAP concept
- BIO4MAP objectives
- Partners involved
- More information

BIO4MAP factsheet - Project information

- **BIO4MAP** *Transparent and high barrier biodegradable film and sheet for customised Modified Atmosphere Food Packaging*
- FP7- Capacities – Research for the benefit of SMEs
- **Starting/Ending** (*duration*)**:**
  - Nov 2013 to April 2016 (*30 months*))
- **Budget :**
  - Total elegible costs: 1.495.369,51€ (1.113.989,83 € EU funding)
- **Consortium:**
  - 10 partners from 5 countries
- **Additional information:**
  - **www.bio4map.eu** - **bio4map@aimplas.es**

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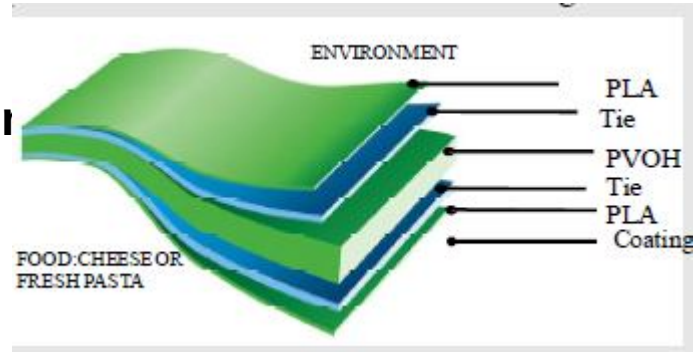
BIO4MAP concept

- Development of innovative **high barrier fully biodegradable and recyclable, multilayer flexible and transparent structure** ***for packaging food products (fresh pasta and different types of*** *cheese)* ***that require customized Modified Atmosphere (MAP) by combining at least two different*** **biodegradable thermoplastic materials, polylactic acid (PLA) and polyvinyl alcohol (PVOH), with different chemical structure and properties.**
- To increase the low moisture barrier of PLA, **a biodegradable coating based on natural waxes will be** developed to cover the inner layer of the multilayer structure. Besides, it will provide protection against bacteria and fungus.
- **The differences of permeability between traditional high barrier plastic packaging materials** (combinations of polyolefins, EVOH, polyamides) and **BIO4MAP's ones (PLA and PVOH), require** optimization and adjustment of the current **combination of gases used to obtain fully biodegradable packages that give similar shelf-life for the food products studied.**

BIO4MAP project aims to achieve the followi
structure by using: **Co-extrusion and coating process: PLA/tie/ PVOH/tie/ PLA/coating.**



BIO4MAP concept

BIO4MAP provides environmentally friendly solutions:

1) The new packages will allow the **easy recyclability of PLA** due to the effortless separation between PVOH and the PLA (PVOH is soluble in water),
2) the new packages will be **fully compostable** in conditions according to the standard UNE-EN 13432 and
3) use of agricultural waste (leaves, greenery) as a raw material source for wax based coating production.

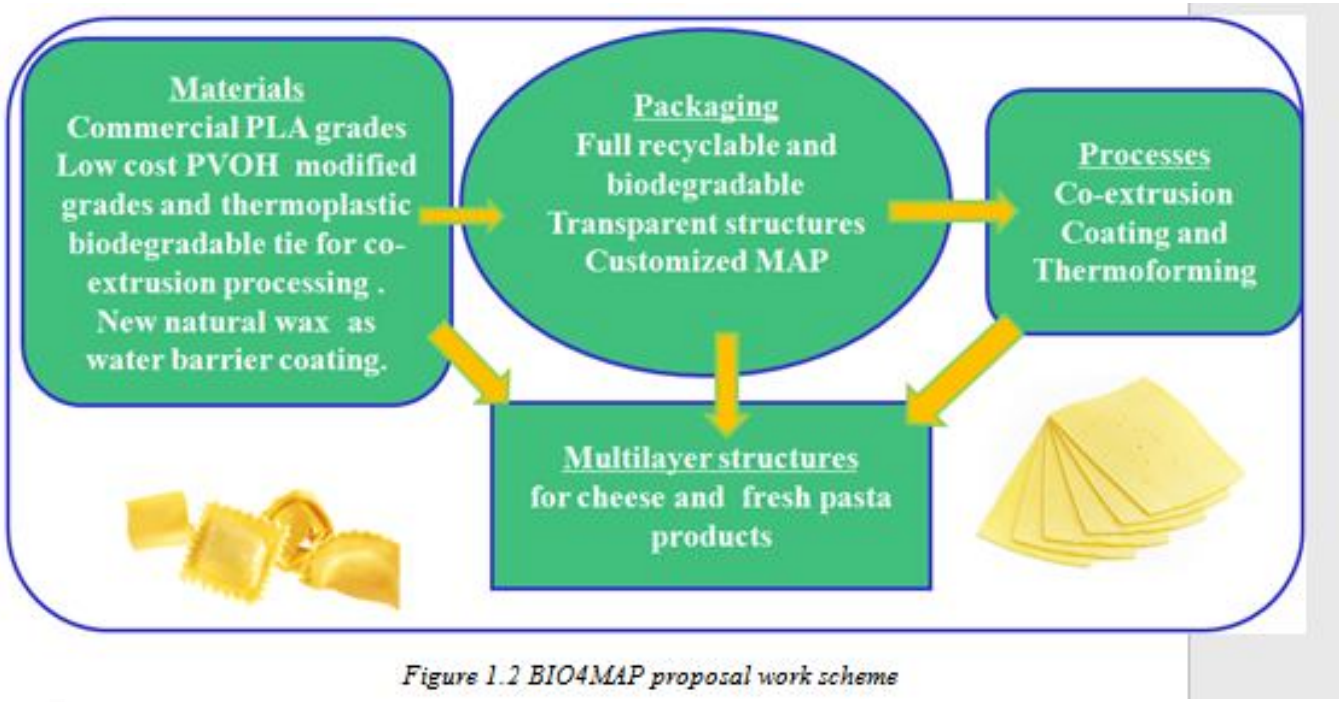


Figure 1.2 BIO4MAP proposal work scheme

BIO4MAP objectives

- To achieve processing capacity of low cost PVOH standard grades. Co-extrusion processing and thermoforming processes.
- To overcome PLA and PVOH incompatibility
- To evaluate the effectiveness of the developed packaging solutions for providing a competitive **shelf-life by maintaining the chemical, physical and sensorial quality** of the fresh pasta and cheese products.
- **Natural wax** use; food contact coating.
- **Competitive cost.**
- Take advantage of the **soluble character of PVOH** to have a fully **recyclable package**.

Partners invoved

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BOBINO Plastique S.A.S.

artibal

valles plastic

ALTONI® PASTA

Åbo Akademi

Montesinos

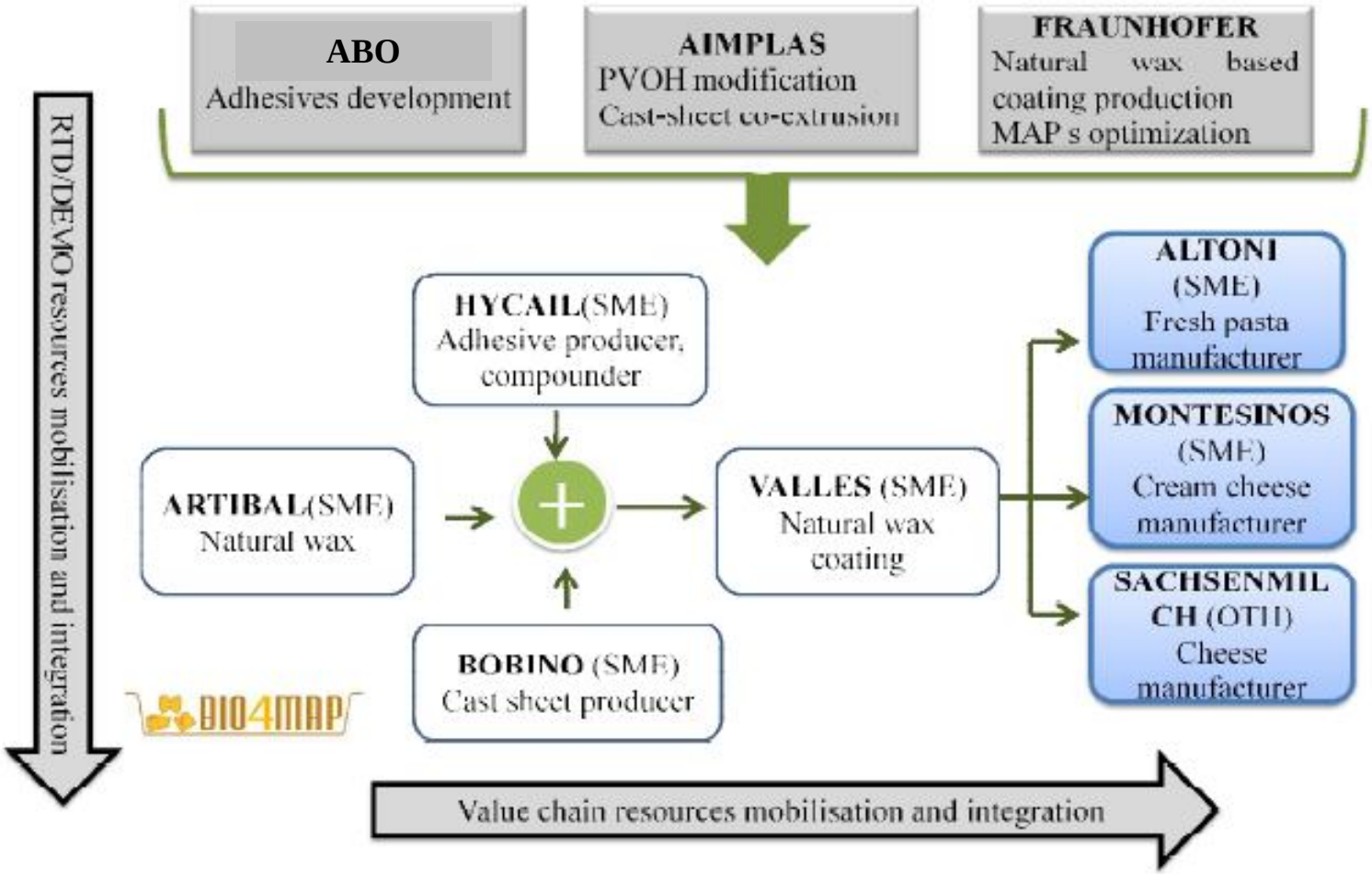
SACHSEN Milch

Fraunhofer IVV

REA

BIO4MAP

Partners involved



More information

- Website www.bio4map.eu:
  - Project objectives
  - Partners
  - Technological watch (technical information related to PVOH, PLA, wax coatings, biodegradable packagings, etc)

- Contact bio4map@aimplas.es

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Thank you for your attention

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