



BIO4MAP 606144 1

BIO4MAP - GA 606144

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

BIO4MAP concept
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This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration.



EMPACK fair (Madrid)
18-19 November 2015



BIO4MAP workshop

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- 16:00 BIO4MAP concept (AIMPLAS)
- 16:10 wax development (FhG-IVV)
- 16:40 tie layer development (ABO)
- 17:10 Multilayer packaging production (AIMPLAS)
- 17:30 END of workshop

BIO4MAP general presentation

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

BIO4MAP factsheet - Project information

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- **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 eligible 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

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- **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.**

BIO4MAP concept

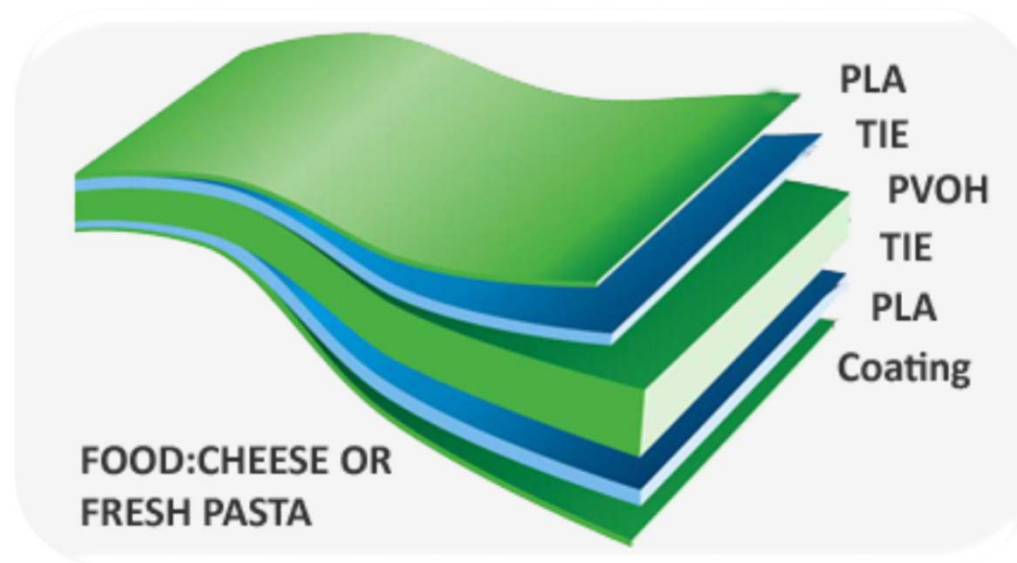
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- To increase the low moisture barrier of PLA, a **biodegradable coating based on natural waxes will be** developed to cover the inner layer of the multilayer structure. Besides, it will provide protection against bacteria and fungus.
- **The differences 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 concept

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



BIO4MAP concept

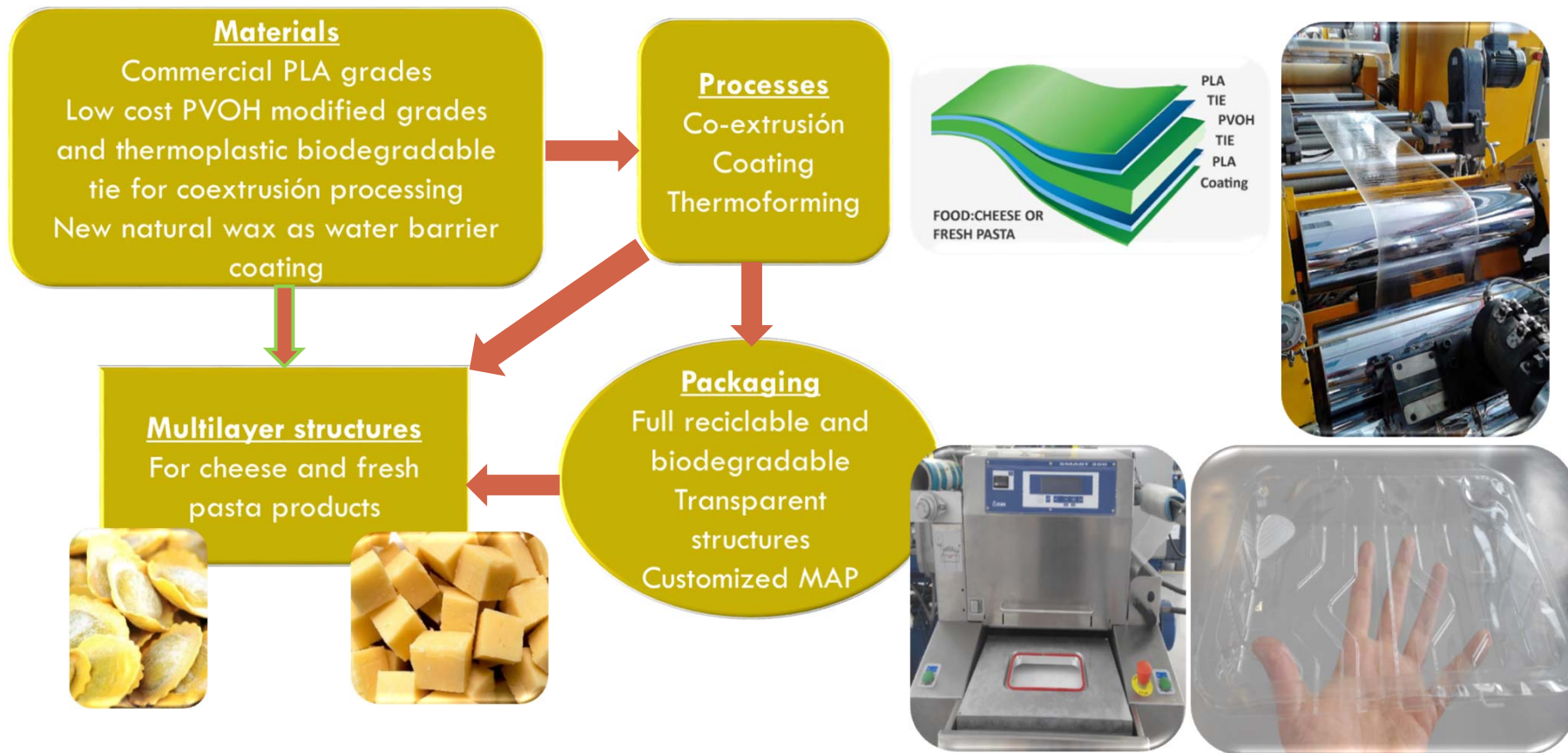
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BIO4MAP provides environmentally friendly solutions:

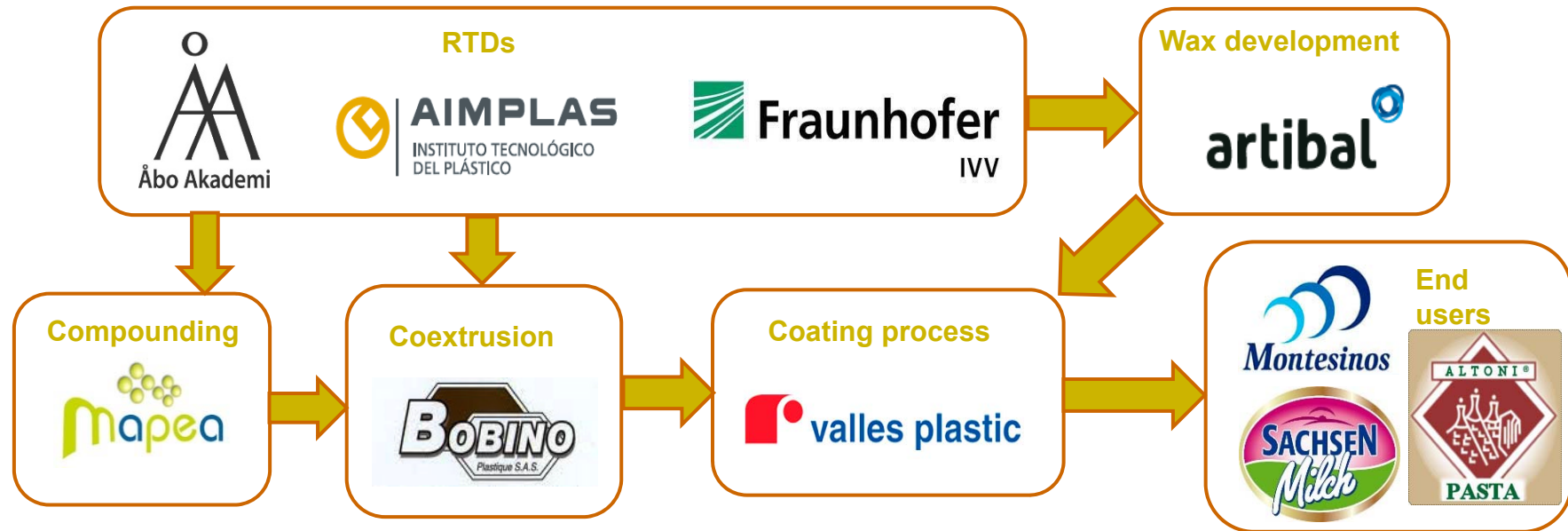
- 1) The new packages will allow the **easy recyclability of PLA** due to the effortless separation between PVOH and the PLA (PVOH is soluble in water),
- 2) the new packages will be **fully compostable** in conditions according to the standard UNE-EN 13432 and
- 3) use of agricultural waste (leaves,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

BIO4MAP development

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Partners involved



BIO4MAP benefits

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- 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.**

More information

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

- Contact bio4map@aimplas.es

Thank you for your attention

Technical issues

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Project Management issues

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AIMPLAS

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