



SISTERS



Good practices for enhancing food packaging with PLA compounds

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The problem

Today's food packaging is predominantly petroleum-based and often single-use, posing challenges with end-of-life disposal due to their non-biodegradable nature.

Compostable materials offer an alternative solution, yet they may lack properties and processability on existing plastic processing equipment, especially in extrusion blowing processes.

The solution

NaturePlast developed PLA-based materials with improved properties for extrusion blowing.

These compounds offer better processability and a balance between viscosity and product properties. They are also certified for industrial composting and have a high biobased content (55-85%).

Benefits



High level of biobased content.



End of life can be optimized by industrial composting.



Can be processed on conventional processing equipments.



Properties adapted for short-term applications.

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PRACTICAL RECOMMENDATIONS



Recommendations for enhancing food packaging with PLA compounds developed by NaturePlast:

- NaturePlast's materials are **compatible with most conventional processing equipment**, but attention is needed for maximum processing temperature and material drying.
- These materials are **suitable for packaging applications where strict barrier properties are unnecessary**. It's crucial to select packaging based on expected properties rather than current performance standards of oil-based materials.
- Clear communication on disposal is essential **to prevent misunderstandings about biodegradation conditions** (e.g., home compostable materials do not biodegrade in natural environments).



About SISTERS and this Practice Abstract

This practice abstract was elaborated in the framework of the SISTERS project, based on the EIP AGRI practice abstract format. © 2023

Project dates: from November 2021 to April 2026.

Goal: to systemically reduce food loss and waste in the main stages of the food value chain in Europe through innovations targeted to each stage of the chain.