



SISTERS



Compostable and/or biodegradable materials for food packaging

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Author:
AITIIP Centro Tecnológico
(Project coordinator)

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Contact information:
AITIIP Centro Tecnológico
(Spain - Project coordinator)
carolina.penalva@aitiip.com

The problem

Plastic food packaging has a huge environmental impact worldwide. The low recycling rate of single-use plastics contributes to the contamination of organic waste streams.





The solution

Biodegradable and compostable materials in food packaging reduce plastic contamination. SISTERS focuses on home compostable packaging. Biodegradation breaks down materials with microorganisms.

Compostable materials biodegrade in specific conditions, often in industrial composting facilities. Home compostable materials break down in home composting environments with less controlled conditions and lower temperatures.

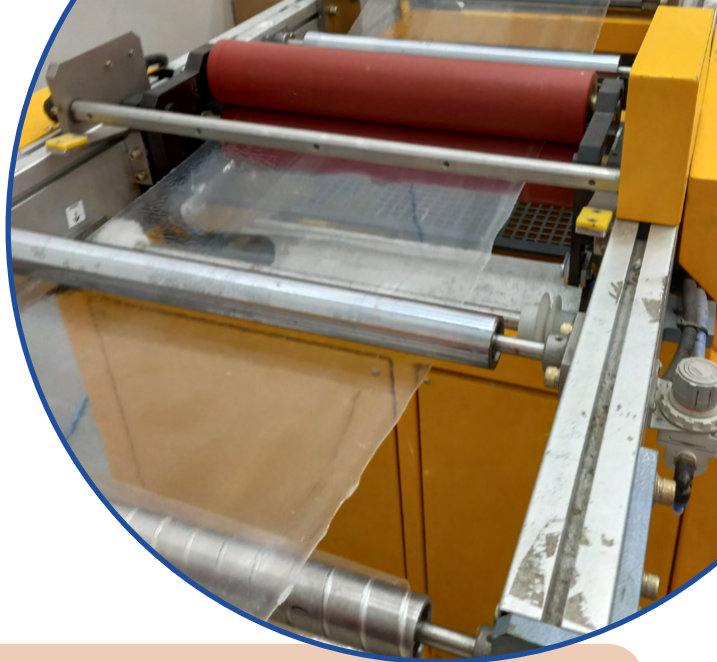
Composting requires biodegradable materials. Compostability refers to a product's ability to biodegrade per standards like EN 13432. Accurate claims specify location and timeframe. Preliminary SISTERS results suggest potential HOME compostable certification for films, trays, and packaging.

Benefits

-  **Good performance for food products without strict barrier properties.**
-  **Minimize plastic contamination due to conventional plastics.**
-  **Novel materials for food packaging that have a low recycling rate.**
-  **Better end of life: compostable at home.**

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PRACTICAL RECOMMENDATIONS



Recommendations for selecting sustainable food packaging and preventing food and plastic waste at the production stage:

- Certain food packaging **benefits from biodegradable or compostable materials.**
- **Fast-food products with short use timeframes** are ideal for such materials, as the contaminated plastic they use usually cannot be recycled.
- While all compostable products are biodegradable, **not all biodegradable products are compostable.**
- Claims of biodegradability or compostability **require specific information and certification.**
- Home compostable materials, like those in SISTERS packaging, **help prevent food and plastic waste.**



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.