



SISTERS

Smart & Sustainable Food Packaging: The SISTERS Approach



SISTERS is developing biodegradable, home-compostable and recyclable packaging solutions.



These materials are tested across food types and environments for high replicability.



Smart labels are also included to guide proper use and disposal.

OBJECTIVES OF THIS WORK PACKAGE



Optimize biobased packaging materials



Integrate enzymes for home compostability



Scale-up & validate at semi-industrial and industrial levels



Improve shelf life and verify food safety



Study economic feasibility

DEVELOPMENT PROCESS

PILOT SCALE PRODUCTION



Various material formulations were tested



Pre-selection of the best-performing options

INDUSTRIAL SCALE PRODUCTION



Scale-up of selected materials for real-world use

FINAL PACKAGING PRODUCTS

Four Packaging Types Developed Using 3 Technologies:

PRODUCT TYPE

TECHNOLOGY USED

Stretch film



Film blowing + cast extrusion

Flow pack & sealed film



Film blowing

PLA clamshells



Casting extrusion + thermoforming

Biodolomer rigid packaiging



Injection moulding

Partners involved in WP3



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This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 101037796