

# BIODEGRADABLE NANOCOATING KITOCOAT™



## WHAT IS KITOCOAT?

A resource-abundant biopolymer-based food coating based on chitosan, is designed to preserve the freshness and extend the shelf life of perishable fruits and vegetables. This sustainable solution serves as an effective alternative to single-use plastic packaging, reducing waste and supporting environmentally-friendly practices.

## BENEFITS



prolonged  
shelf life



biodegradable



non-toxic



physical  
barrier



reduced  
water loss



maintained  
nutritional quality

## WASTE DISPOSAL PATHWAY

The biopolymers are fully biodegradable and will break down naturally within 3-6 months, depending on environmental conditions.



## TARGET LITTER

Substitutes plastic wraps made from LDPE and PP that can take hundreds of years to degrade on the environment.



## IMPACT

Chitosan-based food packaging reduces environmental impact by minimizing plastic pollution and offers significant social benefits, improving food safety, and creating economic opportunities. By utilizing circular economy principles, this product transforms food processing industry byproducts, e.g. shells of crab & shrimp, shell of fly larvae, or fungal (mushroom) cell wall, into valuable resources, promoting a sustainable "waste-to-resource" approach.



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## TARGET AUDIENCE

Farmers, distributors,  
retailers and consumers



## ENVISIONED APPLICATION CASES

Intended for fruits and vegetables  
whose peel is not consumed, in  
packaging lines, distribution and  
storage warehouses, and product  
display on supermarket shelves.



## CONTRIBUTION TO THE INSPIRE PROJECT

The INSPIRE project, funded by the European Union's Horizon program, is a pioneering initiative aimed at contributing to the drastic reduction of litter, macro and microplastics in European rivers in a holistic approach, by utilizing a series of detection, collection and prevention technologies and actions. This eco-friendly packaging solution made from non-synthetic plastics and designed for zero waste, directly reduces microplastics accumulation in the environment. Learn more at <https://inspire-europe.org/>

## THINGS TO MONITOR

Visual observation of color  
changes, along with sensory  
evaluation of stiffness, smell, and  
flavor, will be conducted.



## IMPLEMENTATION STEPS

Instructions for application in  
packaging warehouses,  
supermarkets, and consumer  
settings will be provided.



## CONTACT

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### without KITOCOAT



### with KITOCOAT



DAY 0



DAY 10