



# Plastic Packaging with Prolonged Repellent Activity

## FLEXIBLE ACTIVE PACKAGING WITH REPELLENT CONTROLLED RELEASE



### KEY WORDS

ACTIVE PACKAGING,  
CONTROLLED  
RELEASE  
TECHNOLOGY,

RECHARGEABLE  
ACTIVE FILMS

### DESCRIPTION

Versatile active plastic film with micronized particles on its surface, which acts as repellent carrier prolonging its release. It can be used to repel insects, birds and/or mammals as well as preventing the proliferation of fungi and bacteria. Repellent can be incorporated on the film or directly onto the package. It is possible to recharge the film with the repellent multiple times prolonging its activity up to the end of its usable life. Final film avoids direct contact of repellent with package content and protects it to pests' attack.

### POTENTIAL BENEFITS OR IMPACTS

Easy application, low-cost, green friendly and sustainable technology.

Adaptable to industrial continuous process.

Suitable as a carrier of different repellents without migration to package content.

Safe handling of packaging.

The film can be charged and recharged with repellent prolonging its activity.

Film bulk properties remain inalterable.

Able to carrier others active agents such us antifungal, antimicrobial, flavors, etc.

### TECHNOLOGY MATURITY LEVEL (TRL)

TRL 5: validation in a relevant environment.

### AREA OF APPLICATION

Plastic flexible packaging for contents susceptible to pests' attack such as food, grains and seeds (silo-bags), natural textile fibers, among others.

### CONTACT US

[agrafia@plapiqui.edu.ar](mailto:agrafia@plapiqui.edu.ar)

[Universidad Nacional del Sur](http://Universidad Nacional del Sur)