cronogard® filler extends shelf life of packaged food products

COMPANY/ ORGANIZATION

cronogard®

FOOD CHAIN AREA



ISSUE ADDRESSED

Traditional polymeric materials for packaging food protect it from attack by external agents, but they are not very effective at inhibiting the development of biofilm. Biofilm is a complex aggregation of microorganisms that secrete a protective and adhesive matrix. Some microorganisms are unable to cling to a surface, but they often adhere to the matrix or to those that have already colonized. Once colonization begins, the biofilm grows by cell division and by the integration of external bacteria, including those of other species, which mainly develop at the points where the surface of the packaging comes into contact with the food. This leads to food contamination and waste.

SOLUTION

cronogard® is an EU-funded project that has developed an antimicrobial filler that uses an additive composed of an inorganic and an organic part. The inorganic part captures contaminants in water vapor and gas while the organic molecule's specific function is to capture oxygen and/or make the packaging surfaces less susceptible to colonization by microorganisms. In doing so, the technology reduces the formation of biofilm on packaging surfaces.

cronogard® filler extends shelf life of packaged food products

EXPECTED BENEFITS

Extended shelf life and reduced food waste: The technology has been shown to substantially slow the formation of biofilm (40 to 50%) and guarantee an environment more fit for food preservation. The technology's protective action also improves as the temperature increases (i.e., it protects packages stored in the warehouse and helps with logistics by protecting them from temperature changes in the cold chain).
Convenience: No changes are required in the traditional production chain. Additionally, the technology can replace or work in synergy with transitional preservation techniques.
Expanded distribution technology: It can open new markets for fresh, highly perishable foods (e.g., fresh-cut products, wild berries, and fresh mozzarella).
Environmental sustainability: It is compostable and recyclable.

CASE LINK

www.cronogard.com

CONTACT INFORMATION

Department of Industrial Engineering - University of Salerno
Mail: Via Giovanni Paolo II, 132, 84084 Fisciano SA, Italy
Tel: +39 089 964019
Email: info@cronogard.com