

ACTIVE FOOD PACKAGING MATERIAL

ABSTRACT

Contrary to conventional food packaging that is inert to the food; active food packaging has the ability to act against the contaminants and to remove them.

This technology presents the use of the polymeric films comprising of halloysite nanotubes as a packaging material for food products. The said halloysite nanotubes are incorporated with active agents, such as antibacterial agents (preferably from a natural source) for providing antibacterial, barrier and ethylene scavenging properties.

TECHNOLOGY OVERVIEW

Active and multifunctional packaging materials are facing increasing demand because of the changing trend of the customer needs such as safety and long shelf life of the food material without however interfering with processed materials, preservatives and additives. In order to have safe active food packaging it is crucial to choose active packaging material through incorporation of antibacterial agents.

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Technology Features & Specifications

Food packaging materials with barrier properties against atmospheric gases, water vapour and volatile compounds are required to maintain the shelf life of its contents. This technology features the following:



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- More cost effective
- Safer methods by using a packaging material incorporated with halloysite nanotubes
- Efficient and able to provide good antibacterial, barrier and scavenging properties in the specific area of food products

POTENTIAL APPLICATIONS

Active food contact materials absorb or release substances in order to improve the quality of packaged food content or to extend its shelf life. With the additional antibacterial properties, this effective and efficient active packaging technology offers new and exciting opportunities for (but not limited to):

Packaging

- Food
- Pharmaceutical
- Life Sciences

CUSTOMER BENEFITS

This technology has the following advantages:

- Ability to absorb and release substances that enables the function of the active packaging
- Providing antibacterial, barrier and scavenging properties all within the same product
- Active food packaging properties without using detrimental and harmful agents to human health
- Uses sustainable raw materials
- Easily recyclable

