

SUSTAINABLE PACKAGING MATERIALS FOR THE FOOD INDUSTRY: ROLE OF RADIATION TECHNOLOGY

Food packaging keeps food safe and fresh and protects products during transport, delivery, and storage. On the other hand, packaging also fills trash containers and landfills, lasting far longer than the products it was made to contain and can also transfer chemicals into our food, with unknown health effects. Disposing massive quantities of wastes generated by nonbiodegradable packaging material pave ways for the study of biopolymers as alternative materials for food packaging. Ionizing radiation is the most effective means to disinfect dry food ingredients and an adequate phytosanitary treatment of food and agricultural commodities. The irradiation of food products is today a mature technology, effective, broad spectrum, residue free that can play an important role in food safety and food security. On the other hand, radiation processing of polymers is an attractive option for the food packaging industry worldwide. Practically every type of physical and chemical assay technique has been utilized for radiation studies on biological molecules. The aim of this article is to present some aspects of our own work on the development of edible films based on a combination of polysaccharide/protein - cassava starch and soy isolate protein - among the general application of irradiation technology on packaging materials.

Affiliation

IPEN-CNEN/SP

Country or Int. Organization

Brazil

Primary authors: Dr UEHARA, Vanessa B (Centro Universitario S.Camilo); Dr DEL MASTRO, Nelida L (IPEN-CNEN/SP)

Presenter: Dr DEL MASTRO, Nelida L (IPEN-CNEN/SP)

Track Classification: Track 1: Advanced radiation chemistry and trends in radiation science and technology