KNOW-HOW FOR POLYMER CHARACTERISATION AND DEVELOPMENT OF BIODEGRADABLE FORMULATIONS FOR FOOD PACKAGING

DATOS DE CONTACTO:

Research Results Transfer Office-OTRI
University of Alicante
Tel.: +34 96 590 99 59
Email: areaempresas@ua.es
http://innoua.ua.es

RESUMEN

The Group of Materials Analysis, University of Alicante has a broad experience, expertise and know-how to develop and carry out the characterization of polymer materials, in particular additives, such as plasticizers, colorants and pigments as well as degradation products. Recent expertise in the development of new environmentally-friendly formulations for packaging has lead to the use of biodegradable polymers as base for high-quality and innovative designs.

The know-how involves the ability to measure a large variety of different chemicals used in polymer formulations. The development of analytical methods for identification and further determination of potentially toxic organic compounds has been one of the main fields of work for the Group. Low toxicity and migration degree are two of the parameters for the selection of analytes of the large amount of them currently used in different polymeric formulations.

Techniques for the reliable determination of many different additives used in polymers have been proposed.

In the field of food packaging, new formulations based on biodegradable polymers, in particular polycaprolactone (PCL) and polylactic acid (PLA), with food compatible additives are under study, The addition of natural antioxidants not harmful for humans to commodities used in food packaging is also under study. Those formulations are being characterized and optimized for their use in contact with food.

The Group of Materials Analysis of the University of Alicante seeks to carry out this kind of analyses and associated training activities.

VENTAJAS Y ASPECTOS INNOVADORES

In the Materials Analysis Group we have developed a joint research with other European laboratories in order to propose an alternative to phthalates in plasticized PVC applications. Those materials previously indicated showed promising results and we are interested in collaborating with industries to introduce these new environmentally friendly formulations in industrial processing.

The know-how involves the ability to analyze a large amount of different additives in polymers even at low concentration (values in the order of nanograms). The development of specific methodology increases the expertise in preparing properly the samples by means of highly sensitive and specific analytical methods.

Innovative formulations with reduced toxicity and totally biodegradable for food packaging are under development and will be ready for industrial and processing studies in a short time. We are seeking research partners (industrial and/or research centers) to prepare proposals for joint research.

COLABORACIÓN BUSCADA

Three types of cooperation are sought by the Department of Analytical Chemistry of the University of Alicante:

- Accomplishment of the application of the environmentally friendly plasticized PVC to industrial processing.
- Development of tailor-made formulations for food packaging based on biodegradable polymers and natural additives.
- Instruct people interested in performing the tasks involved in those analyses, with training courses designed specifically for each situation.