UNIVERSIDAD DE GRANADA

Grupo de investigación RNM-332. Ingeniería de Interfases y Tecnología Bioquímica

CHISA 2024 Participation

We are excited to announce that our research group will be participating in the upcoming CHISA 2024, a prestigious Chemical Engineering Congress, scheduled to take place in August 2024 in Prague. Our team will be presenting key findings from our recent studies. Here's a brief summary of our significant results:

1. **Selection of Membranes for the Separation of Saponins and Phenolic Compounds Extracted from Quinoa Husks**: This study aimed to select the most suitable membranes for the separation and concentration of saponins and phenolic compounds from quinoa husk extracts obtained through maceration with ethanol-water mixtures. The use of membranes allows the separation of saponins and phenolic compounds from the extract obtained after maceration of quinoa husks in ethanol:water solutions, avoiding the use of chemical purification methods.

2. **Joint Aerobic Biodegradability of Polyester and Cotton Microfibers and Laundry Surfactants**: This work studied the aerobic biodegradation of microfibers from polyester/cotton fabric in combination with non-ionic surfactants from laundry products. The findings suggest that the presence of microfibers can affect the biodegradation course of surfactants, and vice versa.

3. **Gluten Allergens Removal from Food Contact Surfaces. Protease and Amylase Influence**: This research investigated the effectiveness of enzyme-containing detergents to reduce gluten allergenicity on several surfaces previously contaminated with gluten-containing flour. The results demonstrated a significant gluten allergen reduction ability of detergents formulated with proteases or amylases on stainless steel, silicone, and nylon surfaces.

4. **Surfactants and Skin Irritation**: This study focused on the main adverse outcome at the skin level, irritation, assessed following the specific Test Guidelines (OECD 439) that use an in vitro 3D reconstructed human epidermis (RhE) model. The evaluation of the skin irritation of the surfactants studied

Copyright© 2026 Universidad de Granada

leads to the general conclusion that surfactants Polyoxyethylene glycerol ester have a minor irritation potential than Oxided-based surfactants.

We look forward to sharing our research and engaging with other experts in the field at CHISA 2024. See you in Prague!

GLUTEN ALLERGENS REMOVAL FROM FOOD CONTACT SURFACES
SELECTION OF MEMBRANES FOR THE SEPARATION OF SAPONINS AND PHENOLIC COMPOUNDS
AEROBIC BIODEGRADABILITY OF POLYESTER AND COTTON MICROFIBERS
IN VITRO ASSESSMENT OF SKIN IRRITATION OF SURFACTANTS

Copyright© 2026 Universidad de Granada