

# DEVICE FOR DESALTING SALTED FOODSTUFFS



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### ABSTRACT

The **Applied Electrochemistry and Electrocatalysis** research group at the University of Alicante has developed a device for desalinating food products based on the electro dialysis technique.

The application of an electric field to the device containing the food product to be desalinated causes and allows the movement of the sodium ( $\text{Na}^+$ ) and chloride ( $\text{Cl}^-$ ) ions contained in the product, leaving the product desalinated, considerably shortening both desalination time and water consumption, compared to other more common methods.

The device, which is protected by a patent application, has been developed on a laboratory scale using salted cod as a food product. The research group is currently developing a prototype to be applied in the hotel and catering industry.

Companies interested in the commercial exploitation of the technology are being sought.

### TECHNOLOGY ADVANTAGES AND INNOVATIVE ASPECTS

#### TECHNOLOGY ADVANTAGES

The device developed by researchers at the University of Alicante to desalinate food products has the following advantages:

- It makes it possible to desalinate a salted food product, using a **quantity of water** that is normally **less** than that used in conventional processes and in a **much shorter time**.
- It avoids having to replace the water periodically or to be continuously adding water.
- It allows the **desalination time** to be selected, which is directly related to the percentage or degree of desalination to be achieved for the desired culinary application. Therefore, there is **greater control** over the **degree of salt** to be obtained.
- The application of this technique does not affect either the texture or the quality of the treated food product.
- The device is easily scalable, being able to adapt its configuration for industrial applications as well as for small household appliances for catering.
- The DILUATE compartment is modular.

#### INNOVATIVE ASPECTS

The main innovative aspect of this technology is the application of the electro dialysis technique to desalinate solid salted food products.

### MARKET APPLICATIONS

This technology has its application in the field of **desalination of salted and solid food products** such as: cod, salted bacon, marine sausages, seaweed, anchovies, sardines, herring, olives with excess salt, etc.

The technology could be used both at **industrial** level and in the **catering** sector.

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#### COLLABORATION SOUGHT

Companies interested in acquiring this technology for **commercial exploitation** are sought:

- Patent licensing agreements.
- R&D projects.
- Development projects to adapt them to the needs of the interested party.
- Proof of concept projects, etc.

**Company profile** sought:

- Companies manufacturing industrial machinery for the food sector.
  - Companies manufacturing electrical appliances for the restaurant and catering sector.
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