

The core research activities at the ES BEC focus on developing innovative processes for the recovery of valuable compounds from exhausted brines. This work is carried out through a multi-disciplinary approach that includes chemical modelling, constructing and testing lab-scale units of different technologies, and developing operational pilot systems for demonstration purposes. The main expertise of ES BEC is related to membrane technologies and crystallization including pressure-driven membrane processes: microfiltration (MF), ultrafiltration (UF), nanofiltration (NF), reverse osmosis (RO), forward osmosis (FO) and regenerated membranes; thermal membrane separation processes: membrane distillation (MD) and membrane contactors; electrodialysis (ED): ED metathesis, ED bipolar membranes, ED reversal; and Eutectic Freeze crystallization (EFC).

### IS YOUR COMPANY OR ORGANISATION INTERESTED IN TESTING ITS BRINES? CONTACT FOR MORE INFORMATION:

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# SPAIN BRINE EXCELLENCE CENTRE

**ZERO BRINE** 





The ZERO BRINE project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730390.





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### ANALYTICAL AND MEASURING INSTRUMENTS

- Ion Chromatography (IC)
- Inductively coupled plasma-mass spectrometry (ICP-MS)
- TOC and N analyser
- ♦ HPLC
- Gas chromatography coupled with mass spectrometry
- UV/VIS Spectrophotometer















# **BENCH-SCALE TECHNOLOGIES**

- Microfiltration (MF)
- Ultrafiltration (UF)
- Nanofiltration (NF)
- Reverse osmosis (RO)
- Forward osmosis (FO) and regenerated membranes
- Thermal membrane separation -Processes: membrane distillation (MD) and membrane contactors
- Electrodialysis (ED): ED metathesis, ED bipolar membranes, ED reversal
- Eutectic Freeze crystallization (EFC)
- Dissolved Air Flotation (DAF)
- Sand Filter

## **INDUSTRIAL PILOT SCALE TECHNOLOGIES**

- Ultrafiltration (UF)
- Nanofiltration/Reverse Osmosis pilot plant (NF/RO)



