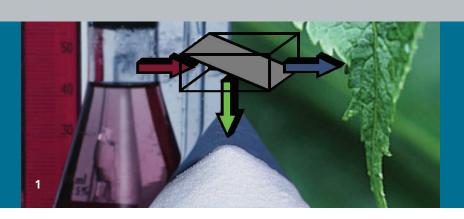


FRAUNHOFER INSTITUTE FOR ENVIRONMENTAL, SAFETY, AND ENERGY TECHNOLOGY UMSICHT



1 Precipitation of solids from solutions

MEMBRANE TECHNOLOGY MOBILE PILOT PLANT STATIONS

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Membrane processes form an ecological and economical alternative to conventional cleaning and regeneration processes.

Often laboratory or pilot tests are necessary in order to assess the separation behavior of the membrane. We dispose of novel test rigs and plants for this testing. Together with you we can use them for chosing the optimal process.

Keywords

- Membrane processes
- Analysis
- Mobile pilot plant stations
- Operation monitoring
- Evaluation of tests

Industrial Sectors

- Water/Waste water technology
- Food technology
- Pharmaceutical industry
- Chemical industry

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1 Conversion plant NF/RO for nanofiltration and reverse osmosis

Technological specifications

Combination Plant NF/RO*

- dimensions of the pilot plant (w x | x h):
 - 2 400 mm x 1 800 mm x 1 850 mm
- material: 1.4571
- module design: spiral wound/ plate and frame module
- number: 6/1
- membrane surface: 45 m²/5 m²
- number of pressure tubes/pockets: 3/45
- pressure up to 40 bar maximum
- permeate flow up to 1 m³/h
- * NF: Nanofiltration
- ** RO: Reverse Osmosis

Our service

- development of membrane processes for recovery of valuable products, water recycling and downstream processing
- accompanying analysis
- provision of mobile pilot plant stations for the operation on site (micro filtration, ultra filtration, nano filtration, reverse osmosis)
- operation monitoring and test evaluation

Your benefit

- minimization of scale-up risks
- determination of design data for large-scale plants
- partial current treatment in operation
- generation of product samples
- modular set-up
- tests feasible on site