

ELECTRICAL CONDUCTIVITY MEASUREMENT CLAMP FOR ION EXCHANGE MEMBRANES

Reliable electrical conductivity measurement clamp for characterization of hydrophilic films as ion exchange membranes, either in lab or on site.

APPLICATIONS

- Water desalination
- Water treatment for drinking water
- Agribusiness (milk, fruit juices etc.)
- Industrial wastewater

INTELLECTUAL PROPERTY

Priority patent application

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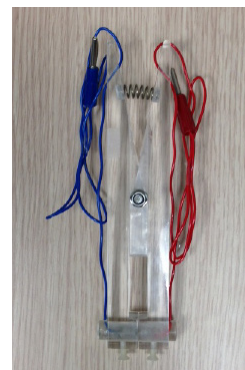
Clamp ■ Electrical conductivity ■ Ion-exchange membranes (IEM) ■
Hydrophilic films ■ NF X45-200 norm

PRESENTATION

Existing techniques for measuring electrical conductivity of hydrophilic films, as ion exchange membranes (IEM), either work with solutions at low concentrations, or provide hard-to-reproduce measures, or require to take the membrane out of its equilibrating solution, thus inducing a bias in the measurement.

Our technology is a clamp with two articulated arms that characterizes the IEM with no bias in measurement thanks to a contactless technology enabling on-site measurement with no contact resistance induced. It is compatible with a wide range of concentrations of equilibrating solutions (from 0.01 M to 1 M) and is compatible for membranes or hydrophilic films with a thickness between 50µm and 1 millimeter, making on-site measures convenient and reliable.

Measure precision is 1% for solutions with a concentration inferior to 0.1 M and 3% for 1 M concentrations.



Electrical conductivity measurement clamp © IDF Innov

COMPETITIVE ADVANTAGES

- Compatible with a wide range of equilibrating solutions concentrations
- Highly accurate & reliable & reproducible measurements
- Portable
- On-site measures (with the membrane in electrolyte)
- No-use of mercure
- Wide range of concentrations
- Non-destructive testing of supports
- Measurement of alternating current at different frequencies, or direct current