

### pergo

#### Argon Nebulizer Gas Humidifier for High TDS Sample Analysis

The *pergo* argon nebulizer gas humidifier is designed for use in ICP analyses dealing with high concentrations of dissolved solids. This humidifier utilizes Nafion<sup>®</sup> tubing that selectively permeates water vapor through its membrane, which humidifies the argon line. The water prevents salt from accumulating in the sample introduction system (nebulizer), which allows for uninterrupted analysis and maintenance free operation.



#### ICP High TDS Sample Analysis

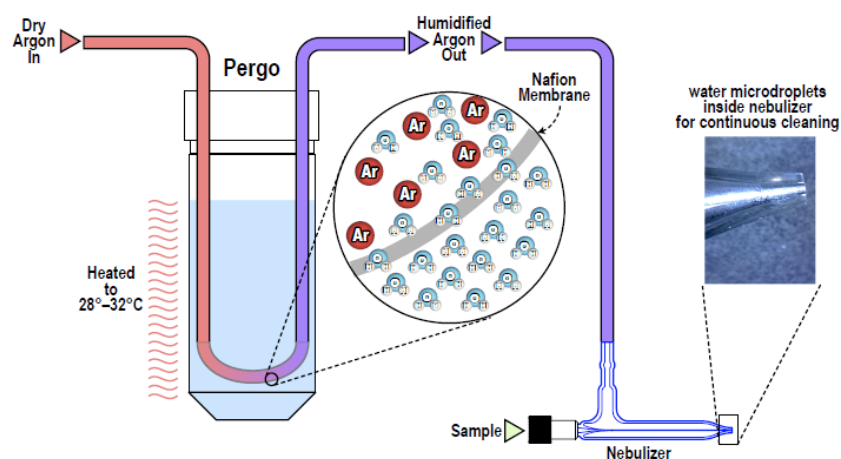
- Seawater samples
  - Oil and gas exploration
  - Environmental monitoring
- Brine samples
  - Chlor-alkali process

#### Difficulties with High TDS Samples

- Salt deposits in nebulizer tip change nebulization efficiency and cause drift
- Salt deposits in ICP injector shift the aerosol direction, causing signal drift and high RSDs
- Injector deposits (salt and liquid) can break free and douse the ICP

#### pergo System

- Compact Ar nebulizer gas humidifier
- Water vapor permeates Nafion<sup>®</sup> membrane humidifying the argon nebulizer gas
- Water reservoir at atmospheric pressure—safe
- For use on any ICP or ICPMS instrument
- For high TDS samples with Meinhard glass nebulizer
- Easy to use and maintain
- Extends the length of analytical runs
- Improved long-term stability
- Improved detection limits

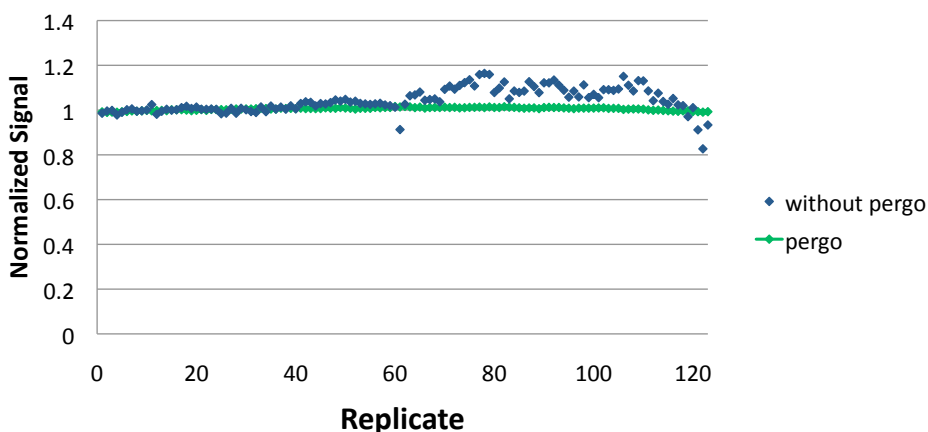


*pergo* System Diagram

Ar nebulizer gas is humidified using a tube-shaped membrane placed in a PFA water reservoir at atmospheric pressure. The water vapor later condenses inside the nebulizer tip, preventing salt build-up.

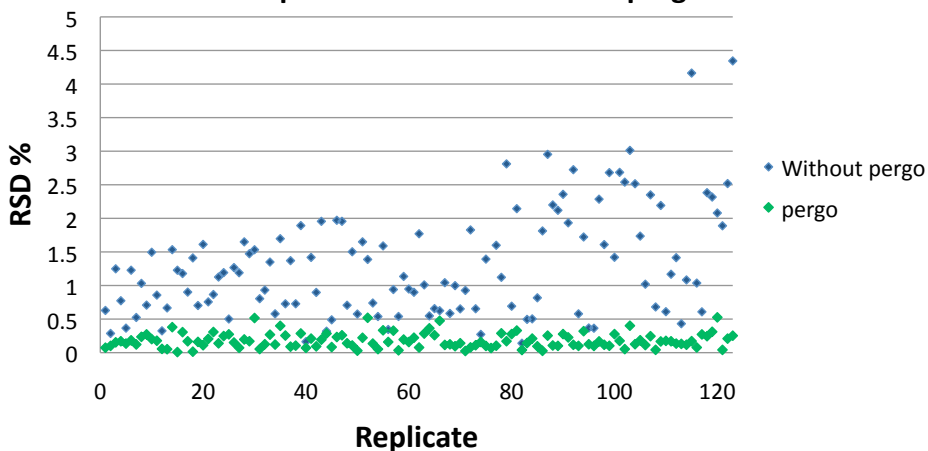
## 9 Hour signal stability comparison Y in 5% NaCL Brine

### Improved Stability with pergo Ar Humidifier



## Improved RSDs for 5% NaCl Brine Samples

### RSD Comparison without and with pergo Ar Humidifier



Part Number	Description
PRG-01	<i>pergo</i> Argon humidifier for analyses dealing with high concentrations of dissolved solids.