

Conquer your most challenging samples with Agilent's humidifier accessory

Technical Overview



Analyze difficult samples with ease

Achieve accurate, reproducible analysis of samples containing elevated levels of total dissolved solids (TDS) with Agilent's humidifier accessory.

The humidifier accessory is compatible with the range of Agilent MP-AES, ICP-OES and ICP-MS instruments. It features hollow fibre membrane tubing inside a bottle containing deionized water which can be attached directly to the front of the instrument.

The humidifier accessory enables the accurate analysis of challenging sample types that may potentially cause particulate build up, and eventually block the nebulizer. Dissolved solids travelling at high speed in a stream of carrier gas can desolvate when passing through the nebulizer orifice. Over time, depending upon the sample, this particulate can build up and obstruct the gas flow, leading to instability in the nebulization efficiency. This ultimately leads to variability in analytical results, typically elevated relative standard deviations (RSDs).

In addition to improving analytical stability, it can also reduce the frequency of routine maintenance when analysing samples with elevated total dissolved solids (TDS).

The humidifier is ideal for the analysis of:

- Environmental samples with elevated TDS or salt content such as sludges and brines
- Food samples with high sugar content such as alcoholic beverages and fruit juices
- Geochemical samples with elevated TDS such as ore digests

Improve long term stability

The humidifier accessory can significantly improve signal stability for analysis of challenging sample types. Using the humidifier, connected to the Agilent 4210 MP-AES, it was possible to analyze a 2 ppm spike of a range of elements in 3% (w/v) NaCl over a period of 8 hours, without internal standardization correction, recalibration or cleaning. It can be seen that the precision (%RSD) for each element was significantly improved when using the humidifier (Figure 2).

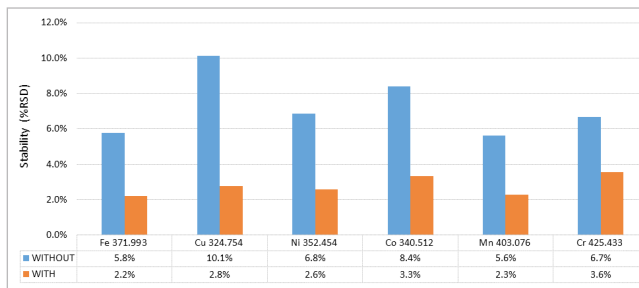


Figure 2. %RSD of elements measured in 3% NaCl over 8 hours with and without the humidifier accessory on the 4210 MP-AES.

This demonstrates significant improvements to analytical stability that can be achieved when using the humidifier accessory for the analysis of elevated TDS samples.

Ordering information

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Published September 1, 2016

Publication number: 5991-7290EN



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