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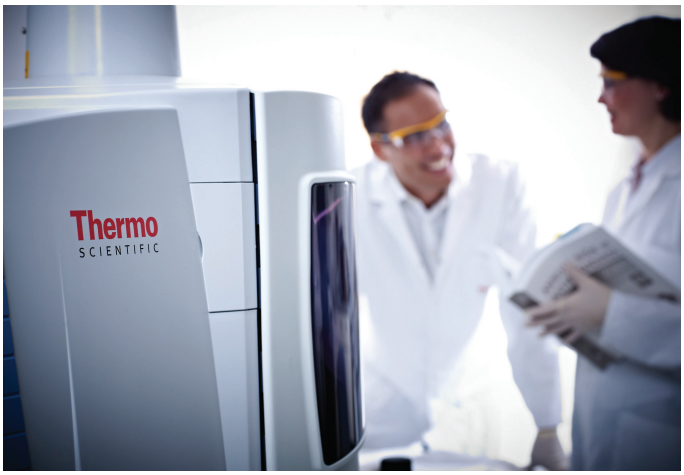
PRODUCT SPOTLIGHT

Thermo Scientific iCAP 7000 Plus Series ICP-OES

Temperature controlled sample introduction for ICP-OES using the IsoMist XR



The Glass Expansion IsoMist™ XR programmable temperature controlled cyclonic spray chamber features a thermodynamic stable design providing an extended temperature range and faster cool-down to facilitate the development of your ICP-OES applications.

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The temperature of the sample introduction system, and more specifically the spray chamber, can have dramatic effects on sensitivity, plasma and analytical stability. A sample introduction system at a constant temperature will enhance the analytical stability of an ICP-OES as the spray chamber is isolated from any temperature fluctuations within the laboratory, whilst temperature extremes (cooling or heating) can be used to optimize specific analyses.

Cooled spray chambers are commonly used for the analysis of volatile solvents. By cooling a solvent the vapor pressure is lowered, thereby reducing the amount of solvent reaching the plasma and enabling greater plasma stability. This also has the advantage of decreasing the background signal produced by matrix-based emissions. Conversely, high temperature spray chambers are used for the analysis of low volume samples, where low uptake rates are typically used. Low sample uptake rate can reduce sensitivity; by heating the spray chamber, more sample aerosol is transported to the plasma thereby increasing sensitivity.

The IsoMist XR is a compact, easy to use Peltier temperature-controlled spray chamber which integrates seamlessly with the Thermo Scientific™ iCAP™ 7000 Plus Series ICP-OES with dedicated models for both radial and duo instruments. It uses the proven Twister cyclonic spray chamber, providing exceptionally fast washout and excellent analytical performance. The IsoMist XR control is managed by a standalone, one screen, and user-friendly software package. When coupled to the iCAP 7000 Plus Series ICP-OES, the IsoMist XR fits within the introduction area of the instrument and does not use valuable lab space.

Figure 1. IsoMist XR.

Figure 2. PFA Twister cyclonic spray chamber.

- Enhanced analytical stability due to the isolation from temperature fluctuations within the laboratory
- Possible to optimize specific analyses due to the selection of temperature extremes in an extended temperature range (from –25 ˚C to +80 ˚C)
- Intuitive control through a Bluetooth® wireless interface or USB cable

Find out more at **thermofisher.com/ICP-OES**

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