IsoMist® Temperature Controlled Cyclonic Spray Chamber With Extended Temperature Range

The IsoMist programmable temperature controlled cyclonic spray chamber features an improved thermodynamic design providing an extended temperature range and faster cool-down, so your ICP is ready to go sooner.

The IsoMist is a compact, convenient and maintenance-free temperature controlled sample introduction system for all ICP's.

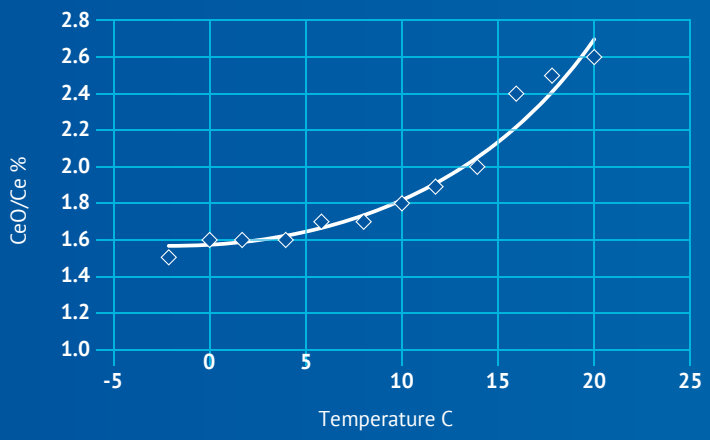
Improved Analytical Stability with Precise Temperature Control

On the IsoMist, the spray chamber temperature is accurately controlled through an improved thermodynamic design using a multi-stage peltier device. The spray chamber temperature is settable in 1°C increments from -25°C to 80°C guaranteeing optimum conditions can be used for any application. The improved cooling efficiency of the new dual-stage peltier design means it is ready, sooner and the cool-down time is reduced.

Reduce Oxide Interferences in ICP-MS

Using the IsoMist spray chamber at sub-ambient temperatures on an ICP-MS, the sample is cooled, less water vapor is transferred to the plasma resulting in lower oxide formation and reduced polyatomic (ArO, ArOH) interferences (*Figure 1*). Less oxides in the plasma mean fewer interferences, improving accuracy and detection limits.

Figure 1. Effect of IsoMist Temperature on ICP-MS Oxide Ratio. Data Courtesy of David Jones, ALS Chemex



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Perfect for Naphtha and Gasoline Analysis

For volatile solvents, a lower sample introduction temperatures reduces nebulization efficiency avoiding quenching of the plasma from solvent over-loading (*see Figure 2*). Now with a minimum operating temperature of -25°C, analyzing volatile organic solvents such as naphtha and gasoline by ICP is even easier.

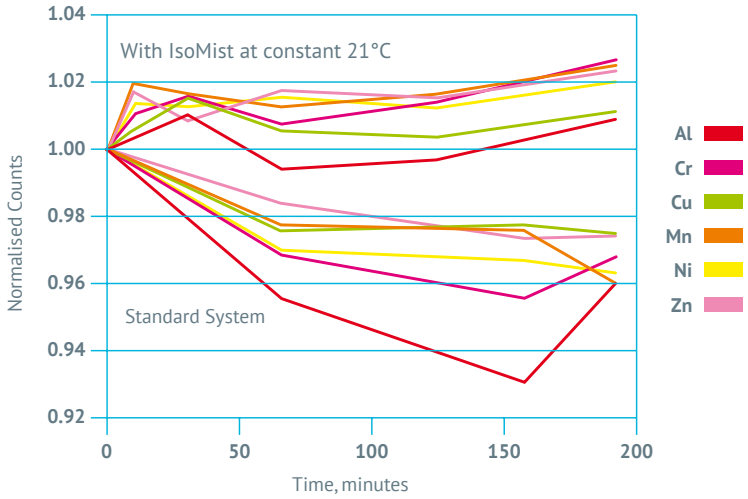
Figure 2. Reproducibility results for undiluted naptha at -10°C (measurements at 90 minute interval)

	Conc, ug/L	Conc, ug/L
Cd	57	55
Cr	31	32
Cu	35	33
Fe	24	23
Mn	11	12
Ni	589	517
Pb	451	424
Sn	216	213
Ti	22	22
V	107	104

Improve Analytical Stability with Constant Spray Chamber Temperature

Fluctuations in the lab temperature affects sample viscosity and nebulization efficiency. Maintaining the sample introduction system at a constant and stable temperature improves analytical reproducibility, enhances throughput and lowers operating costs by reducing the need to re-run samples when a calibration verification check standard (see *Figure 3.*) drifts outside the acceptable upper or lower limits.

Figure 3. Effect of constant temperature on signal stability



Elevated Sample Introduction Temperatures Enhances Sensitivity

The sensitivity for many analyses can be enhanced by operating the spray chamber at elevated temperatures - especially important for limited sample volumes. Heating the spray chamber also helps with the analysis of viscous samples such as lubricants and edible oils.

Easy to Use Software

For maximum convenience, the IsoMist can be controlled from a PC via USB or Bluetooth wireless interface. The spray chamber temperature can be monitored during an analytical run with time vs temperature plot on your PC screen.

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