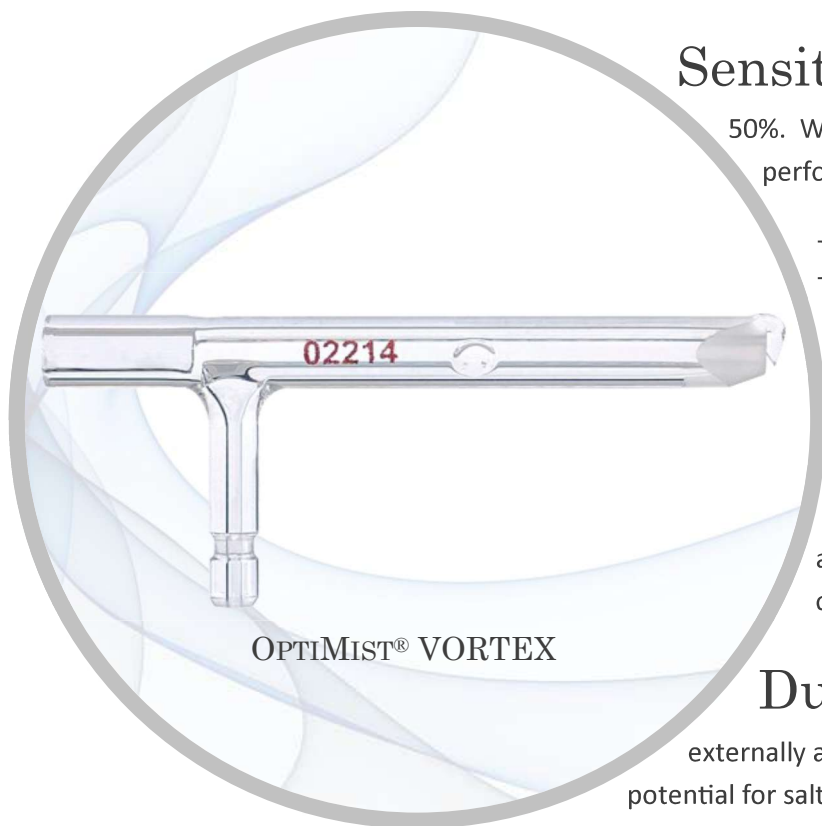


OPTIMIST VORTEX®

ICP-OES Nebulizer

"...Insanely sensitive while at the same time forgiving of difficult samples!"



OPTIMIST® VORTEX

Sensitive Improve your ICP-OES sensitivity by more than 50%. When detection limits are critical the VORTEX will out perform the competition.

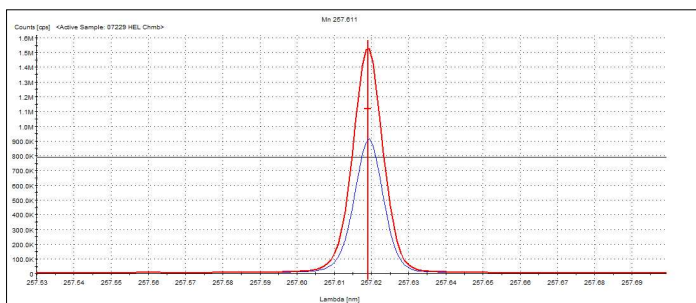
Heritage Non-concentric design employs TSP's exclusive Improved Dual Channel (IDC) technology that separates the gas and sample channels throughout the body of the nebulizer.

Flexible The VORTEX is capable of aspirating the widest range of sample types—from clean water to high salt and high total dissolved solids.

Durability The VORTEX aerosol is aspirated externally at the nebulizer's orifice, significantly minimizing the potential for salt build-up.

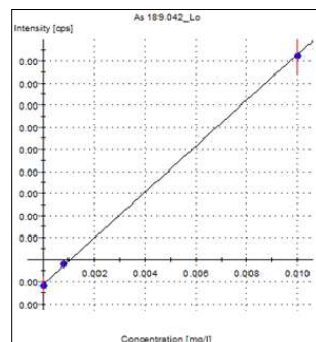
Sensitivity Test

When compared to a popular glass concentric style nebulizer, the VORTEX yields almost twice as much sensitivity, which in turn, provides better detection limits. Manganese (Mn) at wavelength of 257.611 is referenced below. The comparison was done on the same ICP and samples.



Detection Limits

Calibration curves determine the calculated detection limit. The VORTEX is routinely capable of placing sub ppb standards on calibration curves. Here we see a 0.8ppb As standard being used. The detection limit calculated was 0.2 PPB. Arsenic (As) at wavelength 189.042 is referenced below



OptiMist® is a registered trademark of Texas Scientific Products



(800) 878 -7654
sales@cpinternational.com
www.cpiinternational.com

OPTIMIST® SERIES

ICP AND ICP-MS NEBULIZERS



OPTIMIST® series nebulizers have been exclusively designed and manufactured by TEXAS SCIENTIFIC PRODUCTS since 2004 when we opened our doors. OptiMist® nebulizers can be installed into *all ICP's including Agilent, Perkin Elmer, Thermo, Spectro, Leeman, Horiba and Analytik Jena.* We package the nebulizers with the necessary fittings and adapters so they can be **plug-n-play** for the operator.

OPTIMIST® nebulizers are designed to provide the highest sensitivity and precision possible for a given matrix while minimizing the risk of clogging. The unique **Improved Dual Channel (IDC)** design separates the gas and sample channels through the entire body of the nebulizer. The sample aerosol is formed *outside* the nebulizer body on the surface of the tip. IDC combined with **external aspiration** yield unparalleled analytical performance and sample handling.



The toughest matrices pose no threat to these tough nebulizers! OPTIMIST® nebulizers are well suited to handle greases, bio-diesel, precious metals, brines, fusions, fracking fluids and industrial waste waters, fertilizer extracts and pharmaceuticals. OPTIMIST® nebulizers work in conjunction with cyclonic spray chambers, which have become the standard for ICP-OES and ICP-MS sample introduction systems. TSP offers a complete line of spray chambers to fit your model ICP. As always, **we offer a full guarantee** on the quality and capability of our nebs!