

## OneNeb, the new generation of nebulizers for sample introduction systems in ICP-based analytical techniques

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OneNeb is a new nebulizer specifically designed for liquid sample uptake, utilizing inductively-coupled plasma-based analytical techniques (e.g., optical emission spectrometry ICP-OES and mass spectrometry ICP-MS), which is based on Ingeniatics patented Flow Blurring® nebulization technology. This state-of-the-art technology generates aerosols with the smallest drop sizes on the today's market, providing OneNeb analytical nebulizers with significant advantages.



*Figure 1: OneNeb Nebulizer.*

This work's main objective is to show, through experimental results, the advantages of the OneNeb nebulizer. For example:

- *Wide range of physical parameters (i.e., liquid uptakes and gas flows).* OneNeb Nebulizers are highly versatile and suitable for sample injection in all kinds of ICP-OES and ICP-MS. OneNeb Nebulizers are adaptable to almost any liquid-uptake or gas-flow requirements for optimum ICP-OES/MS performances.
- *Polymeric composition.* OneNeb Nebulizers provide extremely good chemical resistance even when used for solutions with high acid content (hydrofluoric acid, sulphuric acid and aqua regia).
- *High sensitivity, first-class precision and good detection limits.* OneNeb Nebulizers analytically outperform other pneumatic nebulizers for tasks requiring both conventional nebulizers (high liquid uptake) and micronebulizers (low liquid uptake).
- *OneNeb can work long periods of time without either clogging or analytical performance deterioration, with simple aqueous solutions, high salt content solutions, highly concentrated acid solutions and organic solvents.*