

RAISE YOUR EXPECTATIONS WITH THE NEXT GENERATION OF ICP-MS



Agilent 7900 Quadrupole ICP-MS

Agilent's quadrupole ICP-MS instruments have led the way in performance and technical innovation since the launch of the 4500 Series in 1994. The 7500 and 7700 Series instruments that followed set new standards for performance and robustness, with developments such as high matrix introduction (HMI) technology, collision/reaction cells optimized for helium mode, and wide dynamic range detectors to allow major and trace elements to be measured in the same acquisition. These developments cemented Agilent's position as the worldwide market leader in quadrupole ICP-MS.

Agilent's relentless focus on improving performance and usability for real-world applications has resulted in the Agilent 7900 quadrupole ICP-MS. The 7900 offers the ultimate combination of matrix tolerance, detection limits, and wide dynamic range to address commercial and industrial applications. These capabilities are teamed with the flexibility and high performance needed for advanced research.

Key technology and performance of the 7900 includes:

- The most robust plasma of any commercial ICP-MS system – typical CeO^+/Ce^+ of <1%. Can be further enhanced with optional Ultra High Matrix Introduction (UHMI) capability, for matrix tolerance up to 25% total dissolved solids (TDS)
- Redesigned interface and ion lens, giving higher sensitivity and lower backgrounds. The result is up to 15 x higher signal to noise compared to the 7700 Series
- 4th generation Octopole Reaction System (ORS⁴), for unmatched control of polyatomic interferences in helium (He) collision mode, and fast cell gas switching (< 5 seconds)
- New, orthogonal detector with fast time resolved analysis (TRA) capability (dwell time of 0.1 ms) and 11 orders dynamic range – from single- or sub-ppt to 1000s ppm (2 orders wider dynamic range than the 7700!)

New interface and ion lens with up to 15x higher signal to noise (compared to 7700)

New Ultra High Matrix Introduction (UHMI) option for matrix tolerance up to 25% total dissolved solids (TDS)

New orthogonal detector with 11 orders dynamic range and fast, 0.1 ms TRA

New ORS⁴ cell with fast (<5 s) cell gas switching



The 7900 ICP-MS is ideally suited to high-performance applications in material science, speciation, food safety, pharmaceutical and clinical research, while also providing the matrix tolerance, productivity and robustness to perform as a high-throughput workhorse analyzer in commercial laboratories.

Hardware optimization routines and software workflow tools support easy setup and operation, ensuring consistent data quality even with new and inexperienced operators.

The latest revision of ICP-MS MassHunter provides both flexibility and usability, with its combination of comprehensive method development tools and powerful data analysis functions.

ICP-MS MassHunter can be enhanced with the optional advanced nanoparticle (NP) analysis software module, which includes a Method Wizard for automated parameter setup, and integrated Data Analysis for size calculation and reporting.

ICP-MS MassHunter provides integrated control of sampling devices including autosamplers, LC, GC, Field Flow Fractionation, Discrete Sampling, Laser Ablation, and more. Support for Agilent's optional Integrated Sample Introduction System (ISIS) and comparable third party devices enables the 7900 ICP-MS to provide a high-performance solution for laboratories with very high sample throughput requirements.



Agilent's Single Nanoparticle Analysis Module for ICP-MS MassHunter software provides a fully-integrated solution for nanoparticle data acquisition and calculation, supporting NP analysis using single particle mode or Field Flow Fractionation.

For more information contact your local Agilent representative or visit: www.agilent.com/chem/icpms



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