

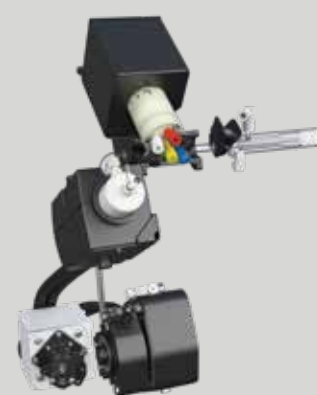
Leave Interferences Behind With MS/MS

Agilent 8900 Triple Quadrupole ICP-MS

Sample Introduction

Low-flow, Peltier-cooled sample introduction system (main picture) provides stable, consistent operation and supports the most robust plasma conditions.

Optional Advanced Valve System (AVS), right, adds a piston pump and close-coupled 7-port switching valve for high-speed discrete sampling.



Ultra High Matrix Introduction (UHMI)

UHMI increases matrix tolerance up to 25% total dissolved solids (TDS). UHMI is standard on the 8900 Standard and Advanced Applications configurations, ensuring high matrix samples can be measured routinely, and practically eliminating matrix suppression.



Gas Control

Four channel argon mass flow control for plasma gases. 8900 Advanced and Semiconductor configurations include 5th (option) gas controller and low Si/S argon flow path.

27 MHz Solid State Plasma RF Generator

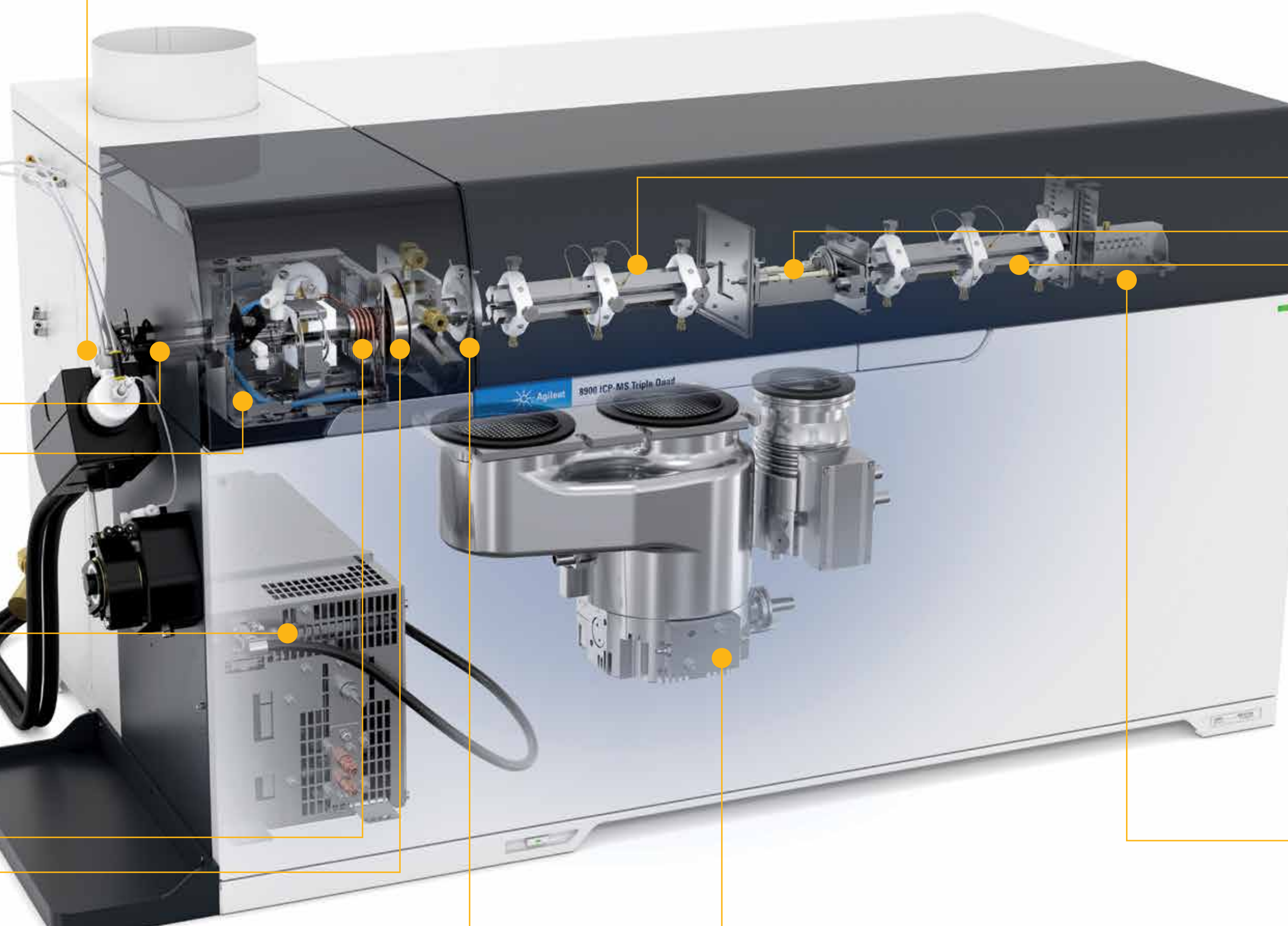
The fast, frequency-matching RF generator offers the highest power transfer efficiency, maximizing matrix tolerance (low CeO/Ce ratio) and tolerating changing sample matrices including volatile organic solvents.

Plasma and Shield Torch System (STS)

Provides high energy for effective matrix decomposition, and precise ion energy control for efficient interference removal in helium mode. Torch auto-aligns following routine maintenance.

Interface Cones

Ni or Pt-tipped cones deliver exceptional matrix tolerance and high sensitivity. Screw-threaded for easy removal during routine maintenance.



Off-Axis Ion Lens

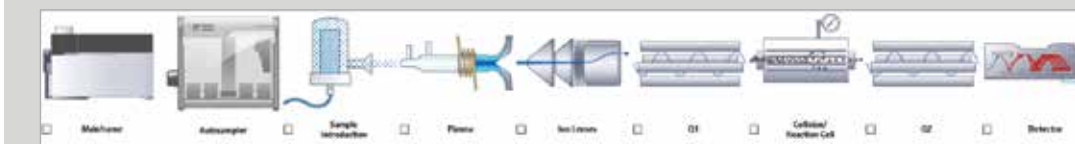
The dual, conical Extraction lens and Omega off-axis lens provide high ion transmission, low background, and minimal mass bias. The ion lens is located outside the high vacuum region, making it easy to access for routine maintenance.

Vacuum System

High-performance 4-stage pumping system with one split-flow turbo pump, a second turbo pump and a single external rotary pump. The enhanced vacuum performance contributes to the very high sensitivity and low background of the 8900 ICP-MS.

Powerful, Flexible, Intuitive ICP-MS Software

With automated system optimization, intelligent method setup, remote monitoring capability and a simplified user interface, Agilent ICP-MS MassHunter software blends powerful features with unprecedented ease of use.



First Quadrupole Mass Filter (Q1)

Full-size, 3 MHz quadrupole with true hyperbolic profile rods for highest ion transmission and optimum peak shape. In MS/MS, Q1 rejects all masses except the target analyte mass, simplifying reaction chemistry in the cell.

4th-Generation Octopole Reaction System (ORS⁴)

Temperature-controlled collision/reaction cell with a 4-channel gas controller for flexibility in cell gas methods. Operates in helium (He) mode and also provides effective, consistent control of interferences in reaction mode with MS/MS. Axial acceleration enhances sensitivity and controls creation of high order product ions.



Second Quadrupole Mass Filter (Q2)

The second high-frequency hyperbolic quadrupole filters the ions that emerge from the cell exit, passing only the target analyte ions/product ions to the detector.

Orthogonal Detector System (ODS)

Dual-mode, discrete dynode electron multiplier provides up to 11 orders dynamic range from 0.1 cps to 10 Gcps. Short (0.1 ms) minimum dwell time in both pulse count and analog modes supports fast-transient signal analysis (optimal for single nanoparticles (sNP), GC, and laser ablation).

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