The Agilent 6460 Triple Quadrupole LC/MS

Each Agilent combination has advantages for different applications. Each uses the same Data Acquisition program, Quantitative Analysis program and Qualitative Analysis program to enable these advantages.

The **Agilent 6460** and **6490 Triple Quadrupole** LC/MS systems are the only Triple Quadrupole that can use the Agilent Jet Stream Technology. This technology utilizes a super-heated sheath gas to collimate the nebulizer spray which dramaticallyincreases the number of ions that enter the mass spectrometer.

You can use one or more of the Agilent 6400 Triple Quadrupole LC/MS combinations to quantitate trace organic compounds in complex matrices:

- Food safety studies
- Environmental studies
- Drug discovery
- Toxicology
- Forensics
- Bioanalysis
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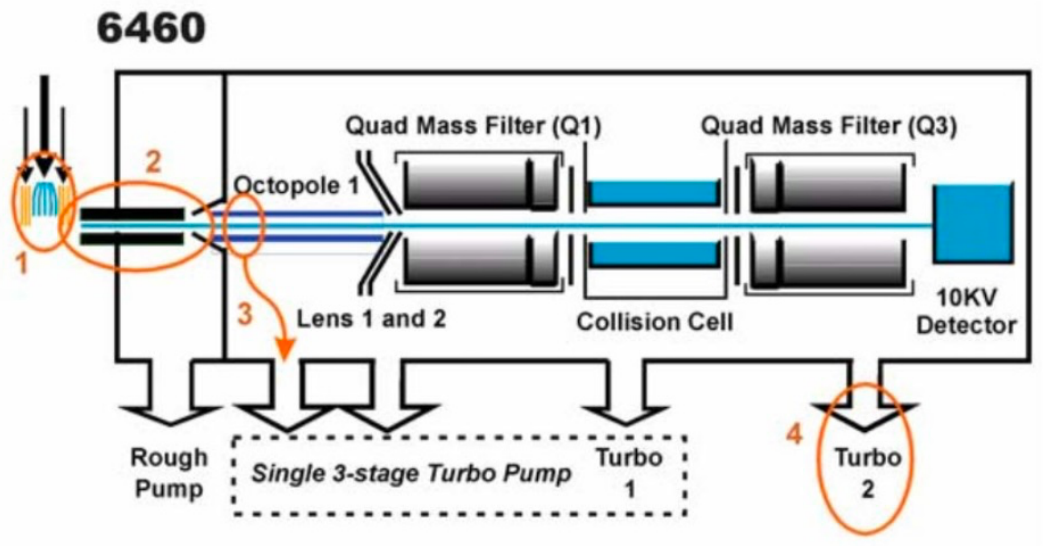
Paired with Agilent's 1260 and 1290 Infinity Series LCs, the 6400 Series Triple Quadrupole MS delivers sensitive, reproducible analyses of target compounds in complex matrices.

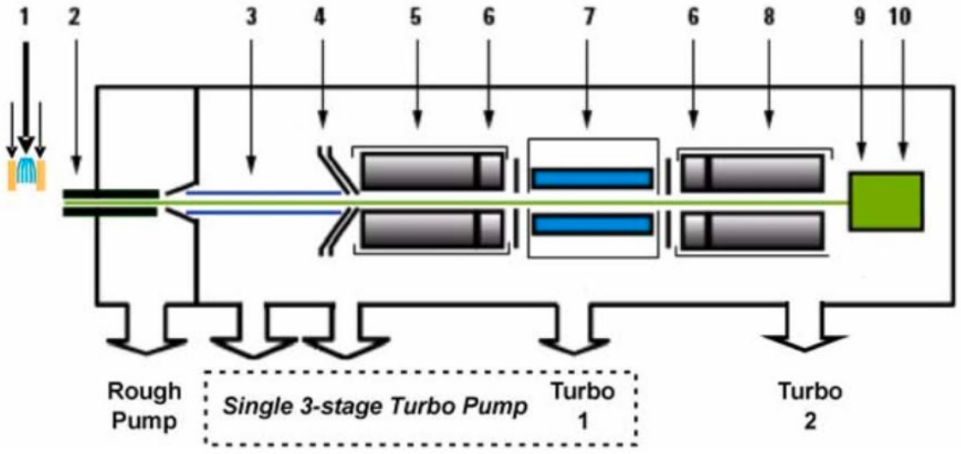
- Femtogram-level limits of detection and quantitation for the 6430 and 6460
- Zeptomole-level limits of detection and quantitation for the 6490
- Minimized memory effects even at very short dwell times
- Simplified operation with Agilent's data analysis software

The triple quadrupole mass spectrometer consists of an ion source, enhanced desolvation technology, followed by ion optics that transfer the ions to the first quadrupole positioned to the right of it. The Agilent 6460 Includes Agilent Jet Stream Technology and 3,000 m/z Q1 and Q2 quadrupoles.



How the Agilent 6400 Series Triple Quadrupole instrument minimizes noise

1. Agilent's orthogonal spray sources maximize ionization while minimizing solvent and matrix noise.
2. This combination of a heated counter-current drying gas, dielectric capillary and skimmer enhances desolvation while minimizing chemical noise.
3. RF Octopole ion guide provides high efficiency ion capture while optimizing wide mass
4. L2 RF enhances high mass ion transmission.
5. Quadrupole 1 uses hyperbolic quadrupoles to optimize ion transmission and spectral resolution.
6. RF quadrupole segment enhances ion transmission into and out of the collision cell.
7. High pressure collision cell with linear acceleration optimizes MS/MS fragmentation while eliminating crosstalk, even at very low dwell times. A small diameter high frequency hexapole assembly assists with capturing and focusing fragmented ions. For the 6490, the hexapole field axial focusing curved collision cell includes a tapered cell structure for increased ion acceptance at the entrance. Its structure reduces the ionizer generated noise.
8. Quadrupole 2 uses hyperbolic quadrupoles to optimize ion transmission and spectral resolution.
9. The off-axis matching dual high energy dynode detector with log amp signal compression permits a high gain with rapid polarity switching, a long life and low noise. The off-axis design allows neutrals to pass without hitting the detector.
10. The multiplier has a long life since only electrons impact its surface, never ions.



Agilent 6460 with Agilent Jet Stream Technology

**Crosstalk is the interference caused when two signals become partially superimposed on each other. In this case residual product ions can interfere with the product ion spectrum of a subsequent MRM experiment.*

SOURCE: Agilent Technologies, Inc. 2012 Revision A, November 2012