Data Sheet

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Agilent 6495C Triple Quadrupole LC/MS with iFunnel Technology

Born out of our drive for innovation, Agilent's 6495C triple quadrupole LC/MS is a powerful and reliable mass spectrometer for applications demanding the lowest limits of detection and highest reproducibility. To maintain high sensitivity for confident results, the 6495C features Agilent's signature octopole ion guide, hyperbolic quadrupoles, curved and tapered collision cell, and advanced detector geometry. The inclusion of a hexabore capillary paired with a third-generation iFunnel greatly enhances signal while reducing noise. VacShield reduces instrument downtime by enabling easier and faster maintenance without breaking vacuum. By combining sensitivity and robustness in a high-performance mass spectrometer, you can be confident in your results with the 6495C triple quadrupole LC/MS.

Parameter	Measure	Specification
MRM Sensitivity IDL ESI Positive	1 fg of reserpine injected on column, quantifying on the transition *m/z* 609.3 to 195.1	IDL<0.6 fg, with 99% confidence (verified onsite during installation)
MRM Sensitivity IDL ESI Negative	1 fg of chloramphenicol injected on column, quantifying on the transition *m/z* 321.0 to 152.0	IDL <0.6 fg, with 99% confidence
MRM Sensitivity S/N ESI Positive	1 pg of reserpine injected on column, quantifying on the transition *m/z* 609.3 to 195.1	S/N >550,000:1
MRM Sensitivity S/N ESI Negative	1 pg of chloramphenicol injected on column, quantifying on the transition *m/z* 321.0 to 152.0	S/N >550,000:1
Mass Range		*m/z* 5 to 3,000
Polarity Switching (Electronics)		≤25 ms
Mass Resolution (Autotune)	Full width at half maximum	0.7 Da
Mass Resolution (Manual Tune)	Full width at half maximum	0.5 Da
Mass Accuracy		0.1 Da from *m/z* 5 to 1.000 0.2 Da from *m/z* 1,000 to 2,000 0.3 Da from *m/z* 2,000 to 3,000
Mass Stability		<0.1 Da in 24 hours up to *m/z* 2,122 in Positive mode and *m/z* 2,234 in Negative mode
Dynamic Range		>6.0 × 10^6, resulting in up to 6 orders of linear dynamic range from the LOD
Acquisition and Scan Modes		MS1 scan, MS2 scan, product ion scan, neutral loss scan, neutral gain scan, precursor ion scan, SIM, and MRM (static, dynamic, triggered)
Maximum Scan Rate		17,000 Da/sec
Maximum MRM Acquisition Rate		500 MRM/sec
Minimum MRM Dwell Time		0.5 ms
MRM Transitions		450 per time segment, up to 13,500 ion transitions per method
Dynamic MRM Transitions		4,000 dynamic MRM transitions per method
Triggered MRM Transitions		Up to 10 MRM transitions (primary and secondary) for library search and compound confirmation
Collision Cell Ion Clearance		<1 ms

General system specifications

Parameter	Specification
Single Point of Control	Single-point data system method capability with full control of Agilent Infinity I and Infinity II and Agilent 6470B triple quadrupole LC/MS systems
Time Programming	Polarity change in time segment Scan and SIM or MRM (plus other modes of data collection) Dynamic and triggered MRM aligns MRMs with compound retention time Solvent divert through calibrant delivery system valve
Wide Range of Ionization Sources	Agilent Jet Stream (AJS) Technology Electrospray (ESI) Nanospray ESI (nESI) source APCI source (Atmospheric Pressure Chemical Ionization) Multimode source (MMI; simultaneous ESI and APCI) APPI source (Atmospheric Pressure Photoionization)
Autotune	Automated optimization of ion optics and mass axis calibration in positive and negative ion modes using a proprietary tune solution
Solvent Declustering	Countercurrent gas, sheath gas (AJS)
Detector	±20 kV High-energy conversion dynode (HED) and high-gain electron multiplier horn
Vacuum System	Two turbomolecular pumps with one mechanical pump
VacShield Assembly	Vent prevention for maintenance-free and robust operation

Ordering information

G6495CA: 6495C Triple Quadrupole LC/MS System

Includes the 6495C Triple Quadrupole Mass Spectrometer, MassHunter Workstation Software with method optimization software, workstation PC, monitor, and service installation of the system.

Disclaimer: Performance specifications in this document are reviewed for accuracy, but they do not represent the tests and procedures performed at installation, which are described in the Agilent 6400 Series Triple Quad LC/MS System Installation Manual, document G3335-90170 or subsequent version number. See Site Preparation Guide and Service Notes for additional product and specification information.
Performance checkout at installation utilizes instrument detection limit (IDL), which is a meaningful and statically relevant measurement of instrument sensitivity. The signal-to-noise (S/N) specification does not predict the limit of detection (LOD) or limit of quantitation (LOQ) for the system or user application. S/N applies only to the conditions or concentrations specified and cannot be extrapolated to any other conditions or concentrations. On-site demonstration of S/N checkout must be purchased as an add-on and will only be carried out on newly purchased 1260 Infinity II Prime or 1290 Infinity II LC systems.
The signal-to-noise specification is determined using the AJS source in MRM mode at unit mass resolution (0.7 ±0.1 Da FWHM peak width) for 1 pg Reserpine on-column (m/z 609.3 to 195.1) (ZORBAX RRHD Eclipse Plus C18, 2.1 × 50 mm, 95 Å pore size, 1.8 µm particle size). After algorithmic smoothing, noise levels are determined using the Auto-RMS algorithm with at least 4 datapoints of ion current from the active MRM transition.

www.agilent.com/chem/6495C

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