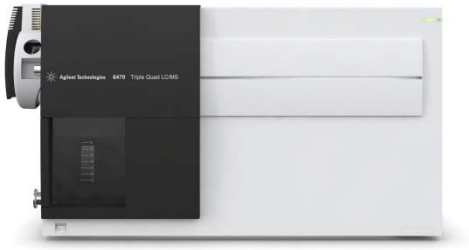
# Agilent 6470 Triple Quadrupole LC/MS System with Agilent JetStream Technology

## Data Sheet



The Agilent 6470 Triple Quadrupole LC/MS delivers superior sensitivity for trace level analysis with performance specifications in signal-to-noise (S/N) and instrument detection limit (IDL). IDL is a rigorous, statistically based metric that indicates practical sensitivity performance of your quantitative assays. The 6470 Triple Quadrupole LC/MS achieves sensitivity and resolution specifications with autotune.

| Parameter | Measure | Specification |
|---|---|---|
| MRM sensitivity Signal-to-Noise ratio (S/N)<br>ESI positive | 1 pg of reserpine injected on column, quantifying on the transition *m/z* 609 to 195 | S/N > 75,000:1<br>Noise 1 × RMS |
| MRM sensitivity Signal-to-Noise ratio (S/N)<br>ESI Negative | 1 pg of chloramphenicol injected on column, quantifying on the transition *m/z* 321 to 152 | S/N > 30,000:1<br>Noise 1 × RMS |
| MRM sensitivity Instrument Detection Limit (IDL)<br>ESI positive | 10 fg of reserpine injected on column, quantifying on the transition *m/z* 609 to 195 | IDL < 4.0 fg |
| MRM sensitivity Instrument Detection Limit (IDL)<br>ESI Negative | 10 fg of chloramphenicol injected on column, quantifying on the transition *m/z* 321 to 152 | IDL < 4.0 fg |
| Mass range | | *m/z* 5–3,000 |
| Polarity switching | | 25 ms |
| Mass resolution (autotune)<br>Mass resolution (manual tune) | Full width at half maximum<br>Full width at half maximum | 0.7 Da<br>0.5 Da |
| Mass accuracy | | 0.14 Da for *m/z* 5–999<br>0.20 Da for *m/z* 1,000–1,999<br>0.30 Da for *m/z* 2,000–3,000 |
| Mass stability | | ≤ 0.1 Da in 24 hours |
| Dynamic range | | > $6.0 \times 10^6$ |
| Scan modes | | MRM, SIM, MS scan, product ion scan, neutral loss/gain scan, and precursor ion scan |
| MRM transitions | | 450 per time segment<br>Up to 13,500 MRM transitions per method |
| Dynamic MRM transitions | | Up to 4,000 dynamic MRM transitions per method |
| Triggered MRM transitions | | Up to 10 MRM transitions (primary and secondary) per analyte for library search and compound confirmation |
| Maximum scan rate | | 17,000 Da/s |
| Maximum MRM acquisition rate | | 500 MRMs/s |
| Minimum MRM dwell time | | 0.5 ms |

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## General system specifications

| Parameter | Specification |
|---|---|
| Single point of control | Single-point data system method capability with full control of Agilent 1200 Series LC systems and 6470A Triple Quadrupole LC/MS/MS System |
| Time programming | • Polarity change in time segment<br>• Scan and SIM or MRM (plus other modes of data collection)<br>• Dynamic and triggered MRM aligns MRMs with compound retention time<br>• Solvent divert through calibrant delivery system valve |
| Wide range of orthogonal ionization sources | • Electrospray (ESI)<br>• APCI source (Atmospheric Pressure Chemical Ionization)<br>• Multimode source (simultaneous ESI and APCI)<br>• APPI Source (Atmospheric Pressure Photo Ionization) |
| Autotune | Automated optimization of ion optics and mass axis calibration in positive and negative ion modes using a proprietary tune solution |
| Solvent declustering | Countercurrent drying 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 |

## Ordering Information

### G6470AA: 6470 Triple Quadrupole LC/MS System

Includes the Agilent 6470 Triple Quadrupole Mass Spectrometry, MassHunter Workstation Software with both compliance and method optimization software, a PC, a monitor, and service installation of the system.

The above are not standard installation specifications for the 6470 Triple Quad. 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.

## For More Information

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