

Agilent 6495 Triple Quadrupole LC/MS System



Key Uses

- Trace-level targeted quantitation of analytes at the lowest detection limits possible.
- Sensitivity combined with robustness for large population-based translational research.
- Routine analysis of large batches of demanding complex samples in testing labs.

Key Features

- Ultimate sensitivity with high precision.
- AI-powered SWARM tuning.
- Early Maintenance Feedback (EMF), Scheduled Tuning, and Intelligent Diagnostics.
- Intelligent Reflex Workflows.

Overview

The new Agilent 6495 triple quadrupole LC/MS system (6495 LC/TQ) is made for demanding and challenging targeted analysis applications requiring the highest analytical sensitivity possible with production-ready robustness. Although oriented towards the highest analytical sensitivity possible without compromising robustness, this instrument was built specifically for research and testing labs investigating large batches of samples. This instrument addresses the critical transition between the 'discovery phase' of research work into the 'translational phase' or 'routine testing phase' where the study of a large population of samples is crucial to obtain meaningful statistics for generating scientific insights.

To support the scientist's endeavor, the 6495 LC/TQ includes numerous intelligence features that are oriented towards demanding routine analysis applications. These intelligence features were specifically designed to maximize instrument performance and analytical sensitivity (AI-based-SWARM autotune), minimize downtime (VacShield, Early Maintenance Feedback Dashboard, and Scheduled tuning), maximize sample throughput (Intelligent Reflex: Fast Screening), and ensure that injected samples don't require re-injection or repeat work. (Intelligent Reflex: Carryover Detection and Above Cal. Curve).



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Agilent 6495 Triple Quadrupole LC/MS System Key Features Explained

Dual-staged iFunnel

The dual staged ion funnel captures more ions for ultra-high sensitivity. The innovative design also allows for good ion sampling at sub-millisecond dwell times without compromising on sensitivity or robustness.

AI-Powered SWARM Autotune

SWARM Autotune is an AI algorithm called Particle Swarm Optimization which varies multiple parameters at a time to obtain the best settings possible. Tuning the instrument in this way captures the cross-interactions between each component, reducing instrument-to-instrument variability, and providing the best overall system settings.

Early Maintenance Feedback (EMF) and Scheduled Tuning

EMF and Scheduled Tuning provide functions to ensure the instrument is in good operation all the time. EMF provides advanced warning to flag when/where the instrument needs maintenance. Scheduled tuning automates the autotune function so that the instrument is immediately ready prior to running samples.

Intelligent Reflex

Intelligent Reflex is a data-dependent worklist reinjection algorithm that:

1. Enhances data quality in real time.
2. Dramatically speeds up sample analysis throughput through a variety of logic-based workflows. (Carryover Detection, Above Cal. Curve, and Fast Screening).

Key Benefits of the Agilent 6495 Triple Quadrupole LC/MS to Lab Operators and Managers

Meaningful Insights

Obtain meaningful scientific insights with an ultra-high sensitivity instrument, designed for high-throughput research and testing labs, that does not compromise sensitivity for robustness. Perform challenging routine analysis on large numbers of complex samples across large sample sets and batches.

Instrument Intelligence

Instrument intelligence keeps the instrument productive for longer: instrument tuning can be automated to ensure that the instrument is in constant, good, working condition; while real-time early maintenance feedback will help the user anticipate when to expect down time.

Analytical Throughput

Analytical throughput can be increased through the addition of more MRMs within a method or through Intelligent Reflex fast screening workflows.

For more information visit www.agilent.com

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