

# Unbelievably Powerful, Remarkably Intelligent

Agilent 6475 triple quadrupole LC/MS



# Intelligence That Powers Ultimate Productivity

The Agilent 6475 triple quadrupole LC/MS is the next step in evolution, building on the LC/TQ platform that customers trust most. The latest innovations will empower your lab to meet increasing sample throughput and productivity demands.

Sophisticated, yet easy-to-use onboard intelligence provides immediate validation of results to improve speed of analysis and predicts when maintenance is needed to reduce downtime. Time-saving automation software lets you schedule calibration in advance so the 6475 LC/TQ is ready to run samples when you walk in the lab. And proven, ultrarugged quadrupole technology ensures instrument reliability for peace of mind and lower cost of ownership.

## Exceed your productivity goals with smart features

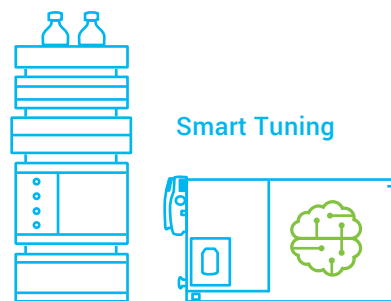
Developed to help labs get past their ongoing at-capacity challenges, the latest onboard innovations in the 6475 triple quadrupole LC/MS provide a pathway to increase your sample throughput and efficiency without having to add more instruments and lab personnel or extend lab hours.

### Peak performance, no guesswork

Tweaking and fine-tuning your LC/MS to optimize performance is challenging and time consuming. An innovative tuning algorithm in the 6475 triple quadrupole LC/MS takes the guesswork out of achieving peak performance. Smart procedures utilize machine learning techniques to evaluate many parameters simultaneously, resulting in faster startup time and greater consistency.

### Maximize uptime, anticipate downtime

Unexpected instrument issues and the resulting downtime is extremely disruptive, especially if you don't know the source of the problem. The 6475 triple quadrupole LC/MS monitors its own vitals, giving you a real-time overview of the system's health. Key operational areas are tracked and monitored as part of early maintenance feedback, to help you pinpoint where and when issues may arise.



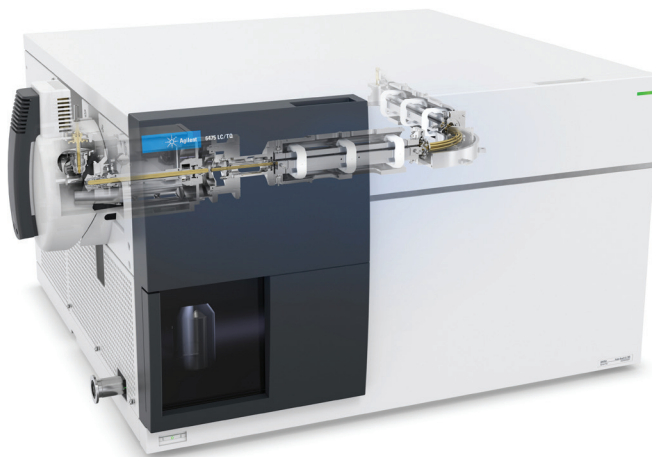
- Peak instrument performance
- Greater instrument consistency
- Faster startup time



- Early maintenance feedback
- Real-time vitals
- Key operations tracking

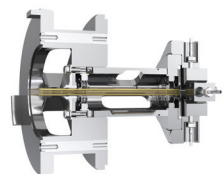
# Consistently Robust and Versatile

The 6475 leverages the trusted technologies that give you the versatility and robustness to handle a large breadth of applications. It also comes with proven performance and reliability from the Agilent triple quadrupole LC/MS portfolio, which is backed by numerous peer-reviewed articles.



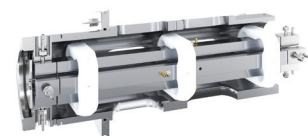
## Less downtime for increased throughput

**VacShield** allows you to routinely maintain the instrument without venting.



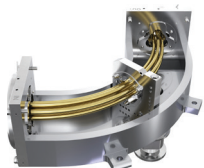
## Analyze a wide range of analytes and ions

The **octupole ion guide** allows you to transmit a wide  $m/z$  range to cover small molecules, peptides, oligonucleotides, and other polymers.



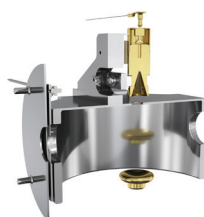
## Confidently quantitate target compounds

**Heated hyperbolic quadrupoles** isolate and transmit ions efficiently, cleanly, with high precision, and with high instrument stability.



## Reduce noise and improve signal

The **tapered and curved hexapole collision cell** refocuses fragment ions and substantially decreases noise by eliminating neutrals.



## Achieve exceptional linear range

A **20 kV high-energy dynode (HED) and electron multiplier (EM)** detector system consistently produces linear results for small, large, positive, and negative ions within the same analytical run.

# End-to-End Intelligence

## Ready when you are

Start your day with immediate productivity with a scheduled autotune. Automatically set your 6475 LC/TQ to tune and calibrate before you even arrive in the lab. Or, set the instrument to periodically produce checktune reports at specified intervals.

The 'Schedule Tune' dialog box is shown with the 'Autotune' tab selected. The 'Scheduling' section has a radio button for 'Monthly' selected. Below it, the frequency is set to 'The first Monday of every 1 month(s)'. The start date is '2/19/2022' and the time is '8:30 AM'. The 'Polarity' section has 'Both' selected. 'Save' and 'Cancel' buttons are at the bottom.

The 'Schedule Tune' dialog box is shown with the 'Checktune' tab selected. The 'Scheduling' section has a radio button for 'Weekly' selected. Below it, the frequency is set to 'Recur every 1 week(s) on:'. A list of days is shown with checkboxes for Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday, all of which are checked. The start date is '2/19/2022' and the time is '8:30 AM'. The 'Polarity' section has 'Both' selected. 'Save' and 'Cancel' buttons are at the bottom.

## System health in real time

Early maintenance feedback (EMF) provides instrument self-awareness by reporting actively monitored metrics in real time. Each component has its own built-in monitor so you can quickly and easily review status and know the health of your instrument.

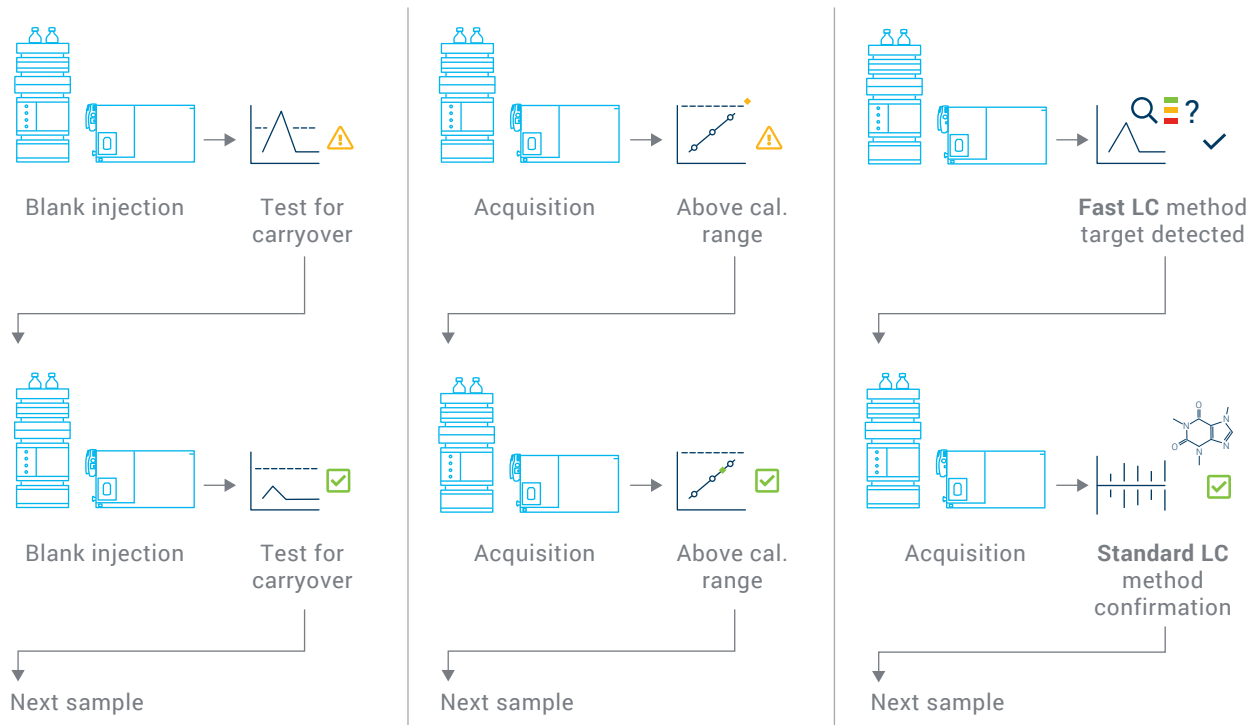
The 'Maintenance' dialog box displays 'Early Maintenance Feedback Counters'. It lists several components with their status and service due information:

- Autotune:** Enabled. Service Due threshold (Days): 31. Expires on 11-Apr-2022.
- Checktune:** Enabled. Service Due threshold (Days): 14. Expires on 25-Mar-2022.
- Injection count:** Enabled. Service Due threshold (Counts): 10000. Remaining (Counts): 9827.
- Diverter valve switches:** Enabled. Service Due threshold (Counts): 10000. Remaining (Counts): 9304.
- Rough pump:** Enabled. Service Due threshold (Days): 365. Expires on 09-Mar-2023.
- Gas filter:** Enabled. Service Due threshold (Days): 365. Expires on 09-Mar-2023.
- Detector health:** Detector lifetime remaining (%) 91%.
- Nebulizer status:** (Green bar)
- Ion injector status:** (Green bar)
- Spray stability status:** (Green bar)

# Ensure Confidence and Throughput with Intelligent Reflex

Intelligent Reflex—our newest confidence and intelligence feature—enables reflexive reinjection logic to ensure your results are immediately trustworthy and within operational limits. Intelligent Reflex dramatically improves lab throughput with the following workflows:

- **Carryover detection** inserts additional blanks to ensure the next sample is unaffected by the previous sample.
- **Above cal. range** detects if a sample is outside of the calibration range. If so, it automatically reinjects the sample with less volume.
- **Fast screening** processes samples with incredible speed. If a target analyte is detected with a fast screening method (short LC gradient), an analytical method (standard gradient) is run on that sample automatically. If the target isn't detected, the system skips to the next sample.





## Reduce Maintenance Time by 92% with VacShield

Maintaining your LC/TQ has never been so easy. VacShield lets you remove the capillary and run the cleaning cycle in as little as 30 minutes—compared to at least 6 hours for maintenance via venting and disassembly. So, you can use your valuable lab time to focus on sample analysis instead.

Procedure	Time without VacShield	Time with VacShield
Cool down to acceptable temperature	15 min	Not needed
Break vacuum and leak air into the instrument	15 min	Not needed
Remove and clean ion injector capillary	20 min	20 min
Power on and pump down	300 min (5 hours)	Not needed
Check tune or autotune instrument	10 min (Check tune) 45 min (Autotune)	10 min (Check tune) 45 min (Autotune)
<b>Total</b>	<b>360 to 395 min (6.0–6.6 hours)</b>	<b>30 to 65 min (0.5–1.1 hours)</b>

# More Flexibility to Ionize Any Kind of Sample

The ability to analyze any application is enhanced with a wide choice of ion sources. Our extensive ion source portfolio lets you choose the ideal match for your specific application.



## Agilent Jet Stream (AJS)

Drastically increase ion formation by enhanced droplet desolvation with the aid of superheated nitrogen sheath gas for ultrahigh sensitivity.

[Learn more](#)



## Electrospray ionization (ESI)

Analyze a broad array of molecules in a concentration-dependent manner. Suitable for standard flow, capillary flow, and nanoflow regimes.

[Learn more](#)



## Multimode source (MMI)

Delivers simultaneous ESI and APCI without having to compromise between information or sensitivity while providing added coverage across a wider range of analytes.

[Learn more](#)

## Atmospheric pressure chemical ionization (APCI)

When you complement your standard electrospray analysis with APCI, you can detect difficult-to-ionize polar and nonpolar analytes.

[Learn more](#)

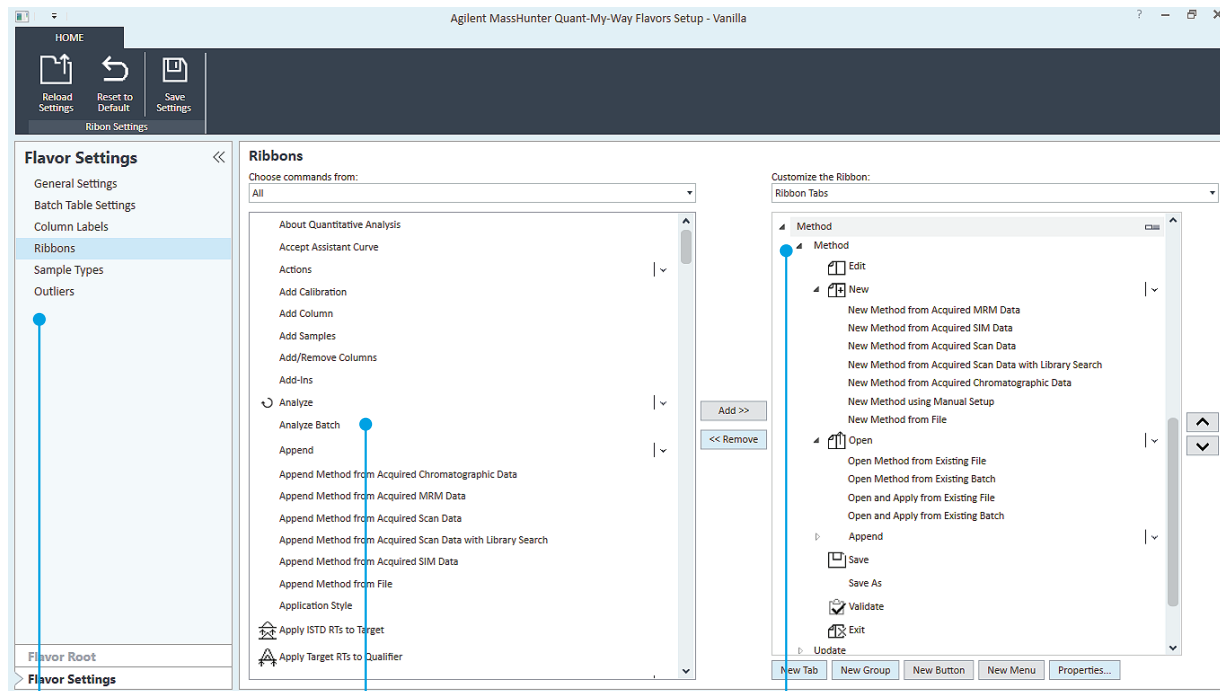


# Save Hours of Sample Processing Time

## Simplify and personalize your MassHunter quantitation with Quant-My-Way

Analyze complex samples with compound-based workflows that combine **MassHunter quantitative analysis** with Quant-My-Way customization and save hours of sample processing time each week.

You can even create your own streamlined version with tools that only display the capabilities important for your analysis.



Hide features you don't need for your specific workflow.

Add only the features you do need for data analysis.

No need to wade through all functions just to find the calculations you need.

## Reduce regulatory costs and risks

Agilent MassHunter software for LC/MS supports Title 21 CFR Part 11 and Annex 11 compliance, so you can reduce the risk of regulatory audits. We can also help you strengthen your compliance efforts with Agilent CrossLab compliance services, which include automation technologies.



# Take Control of Data Integrity and Compliance

Your lab results are only as reliable as the data they're based on. The complexities of safeguarding and managing lab data today can be daunting, no matter which industry you're in. An essential step is implementing a data system that is equipped with technical controls that enable you to:

- **Limit system access:** Ensure that only authorized personnel make changes to your LC/TQ data. Assign roles to provide unique levels of access, and use your domain to provide a unique ID and password for each user.
- **Protect records:** Ensure that all raw data, metadata, and result data is stored in a protected location. A checksum confirms whether records are valid, invalid, or altered.
- **Ensure end-to-end work attribution:** Reconstruct the who/what/where/when/why of every change that took place by recording all user activities in secure, time-stamped audit trails.
- **Document audit trail reviews:** Confirm and document audit trail reviews so you can review records and audit trails in parallel.

## The Complete LC/MS Workflow from One Trusted Partner

Maximize your LC/MS efficiency with our InfinityLab solutions. Agilent InfinityLab LC instruments, columns, and supplies complete your LC/MS workflow to deliver rugged quality and robust analytical results. InfinityLab solutions are designed to work together to provide efficiency gains that help you get more done and reduce operation costs.

### InfinityLab LC instruments

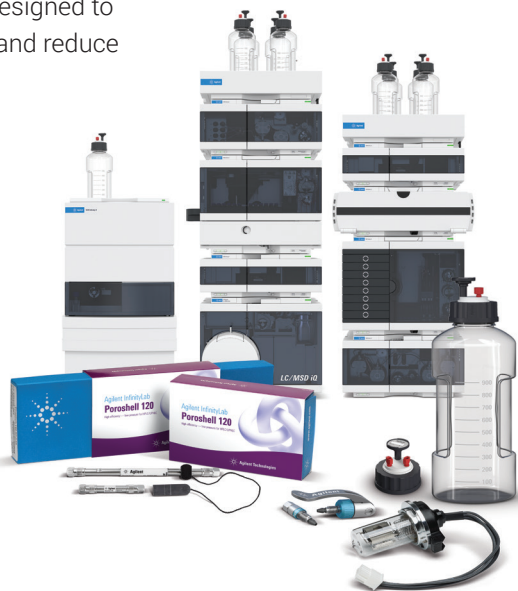
From routine analysis to cutting-edge research, the Agilent InfinityLab LC Series offers a choice of HPLC and UHPLC systems to suit your application and budget.

### InfinityLab LC columns

With three particle sizes and 18 different chemistries, Agilent InfinityLab Poroshell 120 LC columns provide a range of selectivity that makes your method development fast and easy.

### InfinityLab LC supplies

The “small” parts of your workflow can make a big difference in the quality of your results. Agilent InfinityLab supplies are designed to make your daily tasks more efficient.





## An Extensive Portfolio of Triple Quadrupole LC/MS

Our triple quadrupole LC/MS family brings powerful analytical capability to a wide range of applications. These solutions provide the capabilities and performance to solve virtually any analytical challenge.



### Agilent Ultivo LC/TQ

A stackable LC/TQ that saves you bench space while maintaining powerful performance

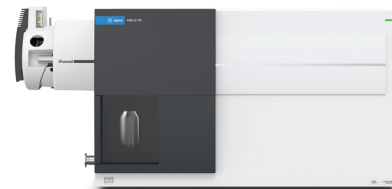
[Learn more](#)



### Agilent 6475 LC/TQ

The robustness you trust with the added benefit of built-in intelligence

[Learn more](#)



### Agilent 6495 LC/TQ

An ultrahigh-sensitivity LC/MS with the reliability for your most demanding challenges

[Learn more](#)

## Put Our Insight to Work for You

CrossLab is an Agilent capability that integrates services and consumables to support workflow success, improve productivity, and enhance operational efficiency. In every interaction, we strive to provide insights that help you achieve your goals. We offer a wide range of products and services – from method optimization and training to full-lab relocations and operations analytics – to help you manage your instruments and your lab for best performance.

Learn more about CrossLab at [www.agilent.com/crosslab](http://www.agilent.com/crosslab)



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