

Agilent 6000 Series LC/MS Solutions

CONFIDENCE IN QUANTITATIVE AND QUALITATIVE ANALYSIS

The Measure of Confidence



Agilent Technologies

SOLUTIONS THAT SET THE STANDARD

Your work with Agilent instruments benefits from more than 40 years of continual innovation in mass spectrometry, liquid chromatography, and other technologies.

The result is systems that set the standard for reliability, flexibility, and sensitivity.

That's important to us because we know you're doing important work. You're keeping our food supplies and water sources safe, protecting human and animal health, discovering and developing new treatments for the diseases that afflict us, and supporting new technologies for clean energy that will sustain us.

Agilent invests heavily in research and development, because we want to make sure we increase the sensitivity and robustness of our instruments while also making them easier to use. We invest in software development, too, to ensure you get clear insights from your data.

The way we see it, your success is our success—and, in the end, everyone's success.



FASTER SEPARATIONS, FLEXIBLE FRONT ENDS AND SOURCES

Many technological developments illustrate Agilent's commitment to innovative design and performance. No matter where you look in our portfolio, the performance and reliability serve to demonstrate that Agilent is serious about mass spectrometry. Agilent is the industry leader for source technology, offering more source options than any other manufacturer.

Powerful HPLC and UHPLC separations

Agilent 6000 Series LC/MS systems integrate seamlessly with our 1290 Infinity II LC system to deliver fast, accurate results. Agilent MS instruments accurately capture the unmatched throughput of ultrafast UHPLC separations. Easy 2D-LC capabilities enhance the data you can get from every separation.



Agilent 1290 Infinity II LC system

A variety of front end options support LC/MS analysis

In addition to liquid chromatography, Agilent offers integrated capillary electrophoresis/MS 2D-LC, superfluidic chromatography (SFC), even GC-atmospheric pressure chemical ionization (APCI) front end capabilities for your MS. The RapidFire 365 liquid handling system can be added for a dramatic increase in throughput.



Agilent 7100 CE system and 1260 Infinity Analytical SFC system

The leader in ion source technology

Agilent offers the widest selection of alternate sources—all compatible with our LC/MS family—to meet the needs of your varying analyses. Choose from electrospray ionization (ESI), APCI, atmospheric pressure photo ionization (APPI), Nano-ESI, Multimode, ChipCube and our premium Jet Stream ion source. Most Agilent sources have a novel low maintenance orthogonal spray geometry, which reduces contamination in the inlet and contributes to instrument robustness.



Choose from: ESI, APCI, APPI, Nano-ESI, Multimode, ChipCube and our premium Jet Stream ion source.

UNPRECEDENTED PERFORMANCE AND PROVEN RELIABILITY

From routine QC to research-level applications, Agilent 6100 Series Single Quadrupole LC/MS systems deliver superior MS data quality in an easy-to-use, space-saving package. With configurations to fit all budgets, the industry's most popular single quad LC/MS complements your existing LC detectors and integrates seamlessly with Agilent's ChemStation LC control.



Agilent 6100 Series Single Quadrupole LC/MS systems: superior sensitivity, flexibility, and reliability in a compact package.

The Agilent 6230 Time-of-Flight LC/MS system delivers unmatched speed and accurate mass performance in a compact bench-top instrument.



The Agilent 6230 Time-of-Flight LC/MS: Unmatched speed and performance in its class.

- Ultrafast scan speed and polarity switching to obtain the maximum information from a single injection—essential for narrow UHPLC peaks.
- Robust orthogonal spray ionization sources, see p. 3.
- Support for open access MassHunter Walkup software and data conversion to MassHunter.

- Stable accuracy at the sub-ppm level to improve confidence and reduce false positives.
- Resolving power to distinguish compounds from interference.
- Excellent sensitivity down to picogram levels of detection.
- Up to five orders of in-spectrum dynamic range to detect trace level targets in the presence of vastly more abundant compounds.

For more information, visit
www.agilent.com/chem/Single_quad
www.agilent.com/chem/TOF

SUPERIOR SENSITIVITY AND ROBUSTNESS FOR UNPARALLELED QUANTITATION PERFORMANCE

Agilent 6400 Series Triple Quadrupole LC/MS systems provide superior sensitivity and renowned reliability for your quantitative applications in pharmaceutical ADME/DMPK studies, biomarker validation, clinical research, food safety, forensics, toxicology, and environmental analyses.

The easy-to-use 6420 offers affordable entry into the world of triple quadrupole analysis. The 6495 incorporates breakthrough Agilent iFunnel technology for ultra-trace analysis—with low-attogram-zettomole limits of quantitation and an unparalleled six orders of linear dynamic range for your most demanding quantitative applications.

- Triggered MRM (tMRM) combines fast and sensitive MRM quantitation with the generation of a product ion spectrum for library searching and compound screening and confirmation.
- Ultrafast MRM acquisition and short MRM dwell times, together with fast polarity switching, ensure compatibility with UHPLC analyses.
- Higher full scan speed allows you to take full advantage of today's high throughput UHPLC chromatography.
- Dynamic MRM (dMRM) simplifies method development and allows thousands of compounds to be quantified in a single method with optimal sensitivity and reproducibility.
- MassHunter Optimizer software automatically optimizes MRM conditions for both small molecules and peptides.

If your analytical needs change, you can easily upgrade the 6470 by adding an iFunnel.

For more information, visit
www.agilent.com/chem/triple_quad



The new standard for triple-quad sensitivity. The Agilent 6495 with iFunnel technology delivers unmatched sensitivity.

ROUTINE ACCURATE MASS, SUPERIOR MS/MS SENSITIVITY, UNCOMPROMISED PERFORMANCE

Agilent 6500 Series Quadrupole Time-of-Flight LC/MS systems provide routine sub-ppm accurate mass, superior MS/MS sensitivity, and uncompromised performance for a wide range of applications.

The 6530 provides excellent value for everyday routine use with robust operation. The 6545 provides enhanced resolution and mass accuracy, along with novel Swarm Autotune technology to optimize small molecule analyses. The 6550 incorporates Agilent's unique iFunnel technology to deliver low femtogram sensitivity for trace analyses. The 6560 provides the added dimension of ion mobility separation and enables direct determination of collision cross sections with superior resolution, sensitivity, and preservation of conformers.



The world's most sensitive Quadrupole Time-of-Flight. The Agilent 6550 iFunnel Quadrupole Time-of-Flight LC/MS delivers the lowest limits of detection over the widest linear dynamic range—in a benchtop system.

- Sub-ppm mass accuracy dramatically reduces uncertainty, improves database search scores and molecular formula generation of unknowns, while minimizing false positives.
- Enhanced resolving power provides added confidence that you are detecting all mass peaks of interest in complex samples.
- Superior MS/MS sensitivity helps you identify very low-abundance compounds at femtogram levels.
- Dynamic range of up to five orders in-spectrum improves detection of low-abundance compounds in the presence of other major components.
- Fast scan rates provide excellent spectral quality for fast UHPLC and HPLC-Chip separations.

For more information, visit
www.agilent.com/chem/QTOF

MASSHUNTER SOFTWARE: YOUR FASTER ROUTE TO INSIGHT

Agilent MassHunter software is designed to make MS analyses faster, easier, and more productive.

In addition to data acquisition and instrument control for your Agilent LC/MS, GC/MS, SFC/MS, CE/MS, and ICP-MS instruments, MassHunter incorporates advanced data mining and processing tools to help you rapidly and accurately extract all available information from the analytes in your samples—not just peaks and data points, but *answers*.

- Unprecedented productivity with time-saving features such as batch-at-a-glance and compounds-at-a-glance data review, dynamically linked results, and customizable views.
- Leadership in compound identification, with personal compound databases and libraries (PCDLs) for pesticides, veterinary drugs, forensics/toxicology, mycotoxins and METLIN (life sciences).
- Customizable to your workflow with add-ons like BioConfirm, Mass Profiler, Mass Profiler Professional, Spectrum Mill, and Profinder.
- Integrates seamlessly with third-party software such as Skyline from the MacCoss Group at the University of Washington.

Learn more and see demonstrations at
www.agilent.com/chem/masshunter

"MassHunter is really good—it's developed over time and it has gotten better and better. With MassHunter, we don't suffer the frustration of delayed results that we do with some other software packages."

DR. NICOLAS TAYLOR
MOLECULAR ACCLIMATION LABORATORY
ARC CENTRE OF EXCELLENCE IN PLANT ENERGY BIOLOGY
UNIVERSITY OF WESTERN AUSTRALIA



Agilent Technologies: The Leader in MS Identification

Look to Agilent for personal compound databases and libraries (PCDLs) to support your easy screening set up for pesticides, veterinary drugs, mycotoxins, and drugs of abuse. In addition to PCDLs, Agilent MassHunter software works seamlessly with METLIN to identify more than 40,000 drug metabolites.

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