SCIEX 4500MD system

Flexibility, versatility, robustness.

One IVD device for every challenge
SCIEX 4500MD system for clinical diagnostics

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The power of precision

Explore the SCIEX 4500MD system: our IVD workhorse for routine clinical testing

With its best-in-class robustness and performance, the 4500MD system can perform high-throughput routine quantitative assays with the upmost reliability and reproducibility.

Available in both a triple quadrupole and a QTRAP version, the 4500MD system delivers the flexibility and performance required to routinely perform a wide range of clinical assays across a variety of complex biological matrices.

Built with the legendary robustness and reliability of a SCIEX mass spectrometer, the 4500MD system is designed to increase throughput and productivity so you can perform your routine clinical assays with confidence.

4500MD system: our IVD workhorse providing the flexibility and robustness of a SCIEX mass spectrometry solution

The 4500MD system features:

Diverse molecule size

Analyze both small and large (up to m/z 2000) molecule from the same samples

Reliability and robustness

Confidently quantify clinically relevant biomarkers and metabolites over hundreds of injections

Regulatory compliance

Benefit from a medical device that meets the high quality and safety standards required by FDA and EU regulations

Polarity switching

Data acquisition of both positive and negative ions within a single run with 50 ms polarity switching

Unique scanning functions

Perform additional workflows using the QTRAP functionaility

Multi-analyte panels

Monitor hundreds of MRM transitions per run with uncompromised accuracy and precision

Source modularity

Quick and simple ion source changes

Flow range flexibility

Ionize analytes across a wide range of flow ranges

Find out more about the 4500MD system

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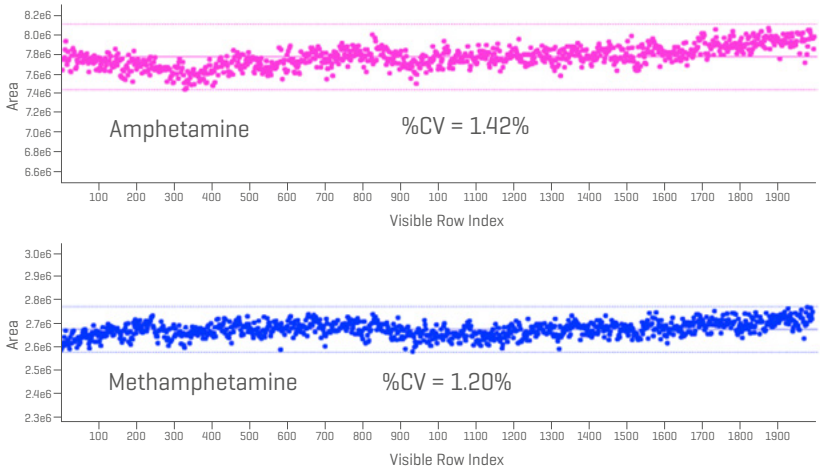
Powerful, robust SCIEX IVD LC-MS/MS system

As scientific understanding evolves into improved clinical diagnostic testing, customers who develop their own assays are turning to fast, sensitive instruments to perform routine tests with high efficiency and cost savings.

SCIEX IVD LC and MS systems provide rock solid, robust performance for biological compounds minimizing maintenance and maximizing uptime.

Our IVD mass spec systems feature the Turbo V ion source and Curtain Gas interface for unequaled reliability, sensitivity, and reproducibility.



Measured peak areas for 2000 consecutive injections on the 4500MD system of a sample containing amphetamine (top) and methamphetamine (bottom) acquired over a period of 5 consecutive days of continuous instrument operation without operator intervention.

The Turbo V Source is engineered for exceptional robustness, delivering stable, reliable ionization across thousands of injections with minimal maintenance

The patented Turbo V ion source is made for demanding applications and considered the gold standard for LC-MS/MS ionization.

The ion source delivers highly efficient desolvation for stable, sensitive performance; virtually eliminating cross contamination— even large sample loads, across a wide range of flow rates.

The Curtain Gas interface provides a wall of clean nitrogen to help prevent neutral components from entering the mass specrometer, so the system is more robust, requires less maintenance, and delivers increased uptime for your lab.

Capitalize on the benefits of mass spectrometry for your clinical laboratory

Mass spectrometry offers clinical labs many advantages over traditional tests. It sets the benchmark for mass accuracy, precision, robustness and sensitivity, giving you data that delivers specificity and sensitivity that simply isn't achievable with any other analytical techniques.

- It also facilitates considerable workflow efficiencies – allowing multi-analyte panels, compatibility with generic sample prep, versatility in allowing the addition of new compounds, requires less preparation of samples and has a lower cost-per-sample than other methods
- Tandem mass spectrometry medical devices from SCIEX can also generate a structural analysis of target compounds
- SCIEX LC-MS/MS systems give you a unique level of performance and application versatility
- Sensitivity to detect low concentrations in biological matrices
- Dynamic range to see low to high concentrations
- Scan speed to clearly resolve similar analytes
- Ionization source flow ranges for LC flexibility
- Compact to fit your valuable bench space
- SCIEX IVD devices and software meet the requirements for compliance and tracking

Mass spectrometry enables accurate, high-throughput quantitation of biomarkers in complex biological samples, offering exceptional specificity and sensitivity to minimize interferences and enhance diagnostic confidence

QTRAP system – **Two** instruments in **One**

The QTRAP 4500MD system is a hybrid triple quadrupole/ linear ion trap mass spectrometer - a unique, flexible MS/ MS system that can accommodate a wide variety of both quantitative and qualitative LC-MS/MS workflows.

It is the ability to use both triple quadrupole and linear ion trap scan functions on a single platform – and even within a single LC-MS/MS run – that makes the QTRAP system adaptable to a wide variety of both screening and quantitative tests.

Unambiguous compound ID using the QTRAP 4500MD system

Leverage the scanning speed and sensitivity of the QTRAP 4500MD system to automatically acquire full-scan MS/ MS spectra for every detected compound during a targeted MRM experiment – quant and qual in a single injection!

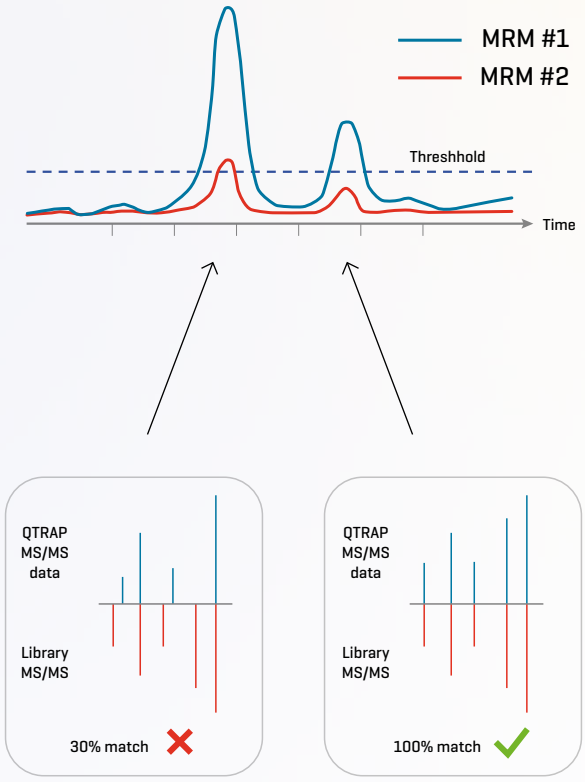
Which of these peaks is the target compound?

In a typical LC-MS/MS chromatogram, there may be numerous peaks observed. If several peaks elute at a similar retention time, it can be difficult to correctly identify the target compound.

Compound ID using MS/ MS library searching

The QTRAP system can be used to rapidly acquire MS/ MS spectra for every detected peak that exceeds a threshold. Library searching of MS/MS spectra allows the unambiguous identification of chromatographic peaks.

While screening by LC-MS/MS for 100's of target compounds in a single method, numerous peaks may be observed for every target mass, owing to the presence of interference ions having common fragment ions and MRM transitions. Using the QTRAP 4500MD system, LC peaks can be unambiguously identified based on library searching of the full-scan MS/ MS spectra that are automatically acquired for every peak that exceeds a predetermined threshold.



SCIEX Now support network

SCIEX Now

- Manage your instruments
- Submit and manage support cases, track status and view history
- Access online training courses and articles
- Manage software licenses linked to your registered instruments
- View and report critical instrument statistics when connected to StatusScope remote monitoring service
- Be a part of the SCIEX community by submitting questions and comments
- Receive notifications from SCIEX with content based on your preferences

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SCIEX Now learning hub

- SCIEX Now learning hub success programs provide LC-MS and CE training customized to meet your exact needs
- With a selection of training methods and certifications available, you can build a mass spectrometry program that is most suited to your lab and users
- Starting with a clear understanding of your desired learning outcomes, we aim to help you improve lab productivity and consistency by designing and delivering a program that is focused on knowledge advancement and retention

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Clinical knowledge center

Empowering clinical mass spectrometry users with the resources they need to succeed

The clinical knowledge center is a resource and education platform for clinical mass spectrometry users. It is designed to provide the technical knowledge required to successfully implement mass spectrometry in a clinical laboratory setting.

The clinical knowledge center includes:

- Training videos for new and expert mass spectrometry users: browse an extensive library of educational videos on topics ranging from understanding the basic elements of mass spectrometry experiments (such as sample preparation, running your mass spectrometer and interpreting your data) to overcoming challenging applications using LC-MS/MS solutions from SCIEX
- Extensive technical content covering specific LC-MS/MS skills: discover technical solution that support the development of clinical testing procedures, technical performance standards, quality control and regulatory compliance
- Access to personalized success programs: help maintain engagement and promote information retention with training modules that are customized to meet your laboratory and staff needs
- Laboratory optimization services: let us assess your laboratory environment to help you quickly increase throughput, reduce costs, improve quality and optimize laboratory operations
- SCIEX areas of expertise: leverage our expertise in areas such as software and IT services, regulatory compliance, laboratory relocation, consulting and customized laboratory training

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LC-MS/MS planning and implementation guide

Expand your clinical laboratory capabilities by incorporating LC-MS/MS

The LC-MS/MS planning implementation guide was developed to help new mass spectrometry users prepare and plan for the purchase, implementation and operation of an LC-MS/MS system in their clinical laboratory. Our guide is a valuable resource that walks you through everything you need to know about getting started with mass spectrometry.

The guide includes useful information answering the following questions:

- What is mass spectrometry?
- Which mass spectrometer is the right fit for my analytical needs?
- What do I need to consider when adding mass spectrometry to my clinical laboratory?
- How do I prepare my organization for a successful implementation?
- How can SCIEX help ensure a smooth adoption and transition?

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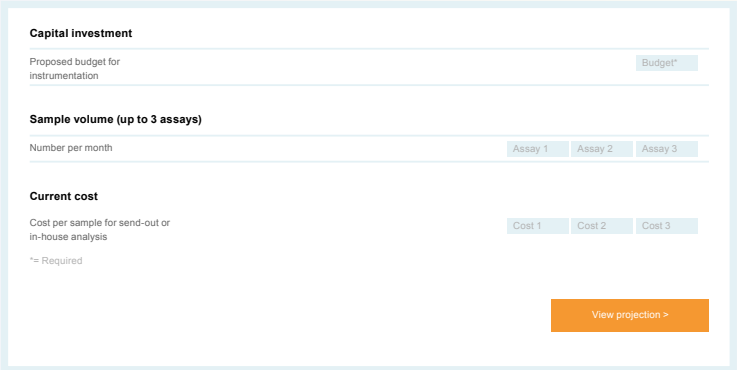
The ROI calculator tool

Find out how profitable your lab could be with LC-MS/MS technology

The ROI calculator is a tool that helps you determine the profitability associated with capital expenditures for your organization. SCIEX offers this tool to help you explore the financial value a mass spectrometer can bring to your clinical laboratory.



See how profitable your lab could be in 3 easy steps:

1. Enter your budget
2. Enter the sample volume
3. Enter the sample cost

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