

SCIEX 7500 System


GO **BEYOND.**

GO BEYOND the current limits of sensitivity, productivity targets, ruggedness and robustness challenges. **GO BEYOND** with the SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready.

Enter a new era of sensitivity in LC-MS/MS. The SCIEX 7500 System can enable new levels of quantification across a large suite of sample types and workflows.



Powered by SCIEX OS Software


The Power of Precision

SCIEX 7500 System

GO BEYOND robustness with breakthrough innovation...

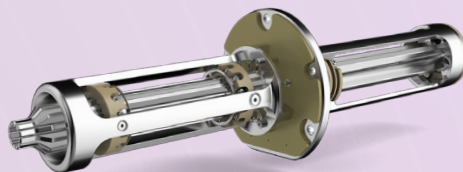
INCOMPARABLE

GO BEYOND sensitivity. Built with D Jet™ Ion Guide and integrated E Lens™ Technology, the SCIEX 7500 System enables you to experience up to 7X increased sensitivity. Start detecting the previously undetectable and quantify at lower levels with impressive precision.



INGENIOUS

GO BEYOND your laboratory's current capabilities. Characterize analytes that were once masked by matrices with the D Jet Ion Guide. The unique design of the ion guide retains and captures more of the ion plume. The evolution of the Turbo V™ Ion Source, the OptiFlow® Pro Ion Source, simplifies sample prep and utilizes E Lens Technology to sample more ions, so you can get more from your ESI workflows.



PRODUCTIVE

GO BEYOND and expand your lab's potential to a new dimension of efficiencies, compound analysis and sample testing. The SCIEX 7500 System is powered by SCIEX OS Software, a platform for this next generation of mass spectrometers. Experience intuitive software features and functions that are complemented by visual aids and components to enable quick, accurate and confident data review on the SCIEX 7500 System.



The QTRAP-enabled functionality opens up the SCIEX Triple Quad to a world of possibilities with MS/MS confirmation, enhanced selectivity with multiple reaction monitoring with multistage fragmentation (MRM³) and enhanced product ion (EPI) scan types.

GO BEYOND with the SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready.

GO BEYOND 

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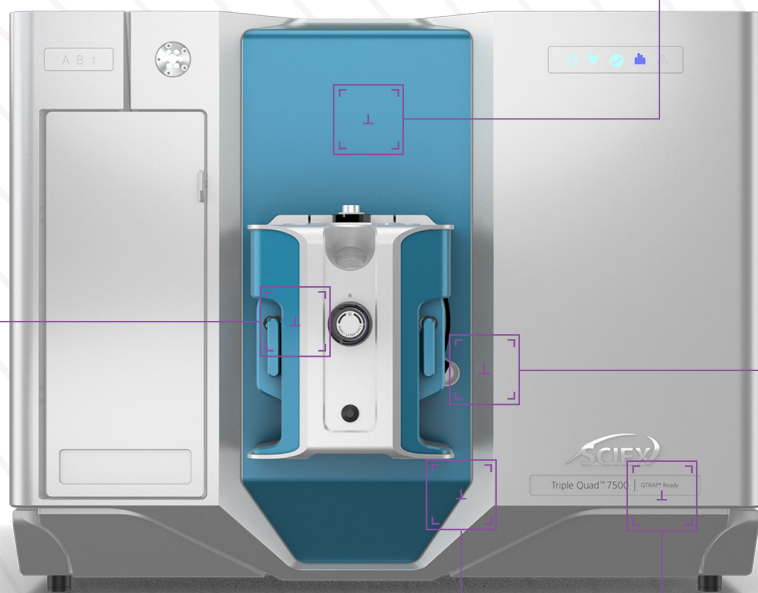
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SCIEX 7500 System

IONIZATION SOURCE

Execute fast interchanges between high flow and low flow to adapt to your workflow needs. The OptiFlow® Pro Ion Source introduces a new modularity feature and incorporates the reliability and efficiency of the legendary Turbo V™ Ion Source.



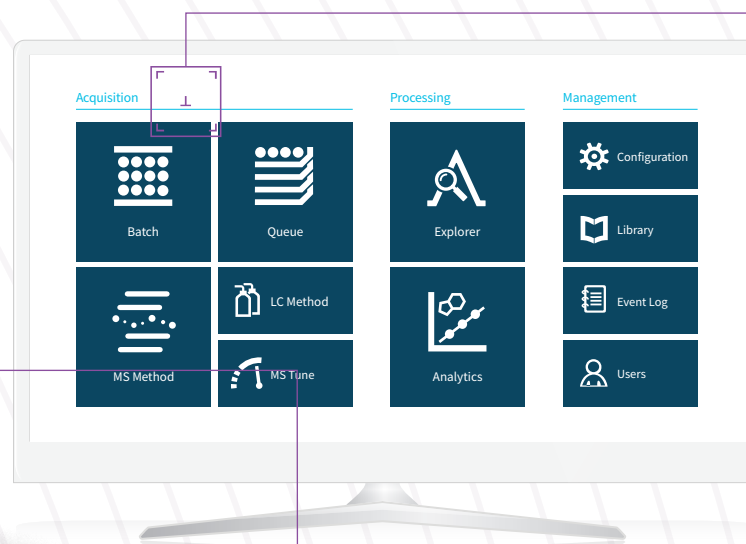
DETECTION

Attain lower levels of quantification compared to other SCIEX instruments. The precise and robust engineering of the ion rail allows consistent and reproducible analysis time after time, by focusing on the crucial ions that you need for your workflow.

[Learn More](#)

SCIEX OS SOFTWARE

Analyze and represent your data in a new and intuitive format. Control, acquire, analyze, interrogate and report, all on one software platform.



E LENS™ TECHNOLOGY

Sample more ions so you can get more from your ESI workflows and protect your precious and limited sample. With the E Lens Technology, the power and efficiency of the Turbo V Ion Source geometry is enhanced in the new OptiFlow Pro Ion Source, which focuses the transmission of ions in the ESI plume into the orifice of the system.

QTRAP® READY

Future proofing your lab with a single platform. All the benefits of QTRAP functionality available with activation of a software license. Triple quadrupole functionality for quantitation plus full scan MS/MS for confirmation and MRM³ for selectivity.

D JET™ ION GUIDE

Capture more of the ESI plume and retain more of the important ions than with previous technologies. The D Jet Ion Guide efficiently captures and transmits the ions in the high gas flow behind the orifice plate and focuses analyte ions from the sample into a tight beam.

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GO **BEYOND**™



SCIEX 7500 System

OPTIFLOW® PRO ION SOURCE

Turbo V™ Ion Source

Since the introduction of the API 4000™ LC-MS/MS System, the Turbo V Ion Source has been an integral part of SCIEX instruments. The robust source is a driving force behind efficient analytical workflows and synonymous with efficiency and unrivaled productivity. In pharmaceutical development, food and environmental testing, life science research discoveries, clinical workflows and forensic investigations, laboratories all over the world have been leveraging the robust and ruggedness of SCIEX systems to examine complex and crude matrices.

And now...we **GO BEYOND**



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GO **BEYOND**



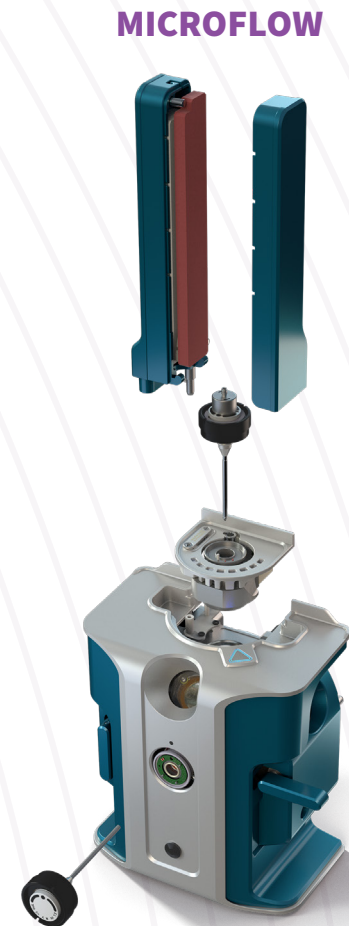
SCIEX 7500 System

THE EVOLUTION OF THE TURBO V™ ION SOURCE IS HERE

The OptiFlow® Pro Ion Source is built on the foundation of the legendary Turbo V Ion Source and is incorporated into the SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready. The simplistic architecture and orthogonal spray design with the V heater configuration provide an ideal temperature distribution and optimized Curtain Gas™ flow to achieve high sensitivity from the ESI droplets. You have the flexibility to set up any workflow quickly. Whether it's standard ESI and APCI workflow or even the option of setting up microflow workflows, you can achieve optimal spray conditions without manual adjustments. This durability and flexibility on the SCIEX 7500 System, offers you a wide compound class coverage to address your laboratory's opportunities.

Take advantage of quick switching between flow regimes. The source is compatible with a broad flow range from microflow (1 µL/min) to analytical flow (up to 3 mL/min) with interchangeable probes and electrodes, selecting the right flow rate for the job that will generate the highest quality results is now easier. You now have the option to quickly switch to microflow hybrid electrodes and potentially boost your detection limits and save costs on mobile phase expenses.

The OptiFlow Pro Ion Source paves the way for your lab to **GO BEYOND** its capacity, offer new services and discover more about your samples.



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GO **BEYOND**™



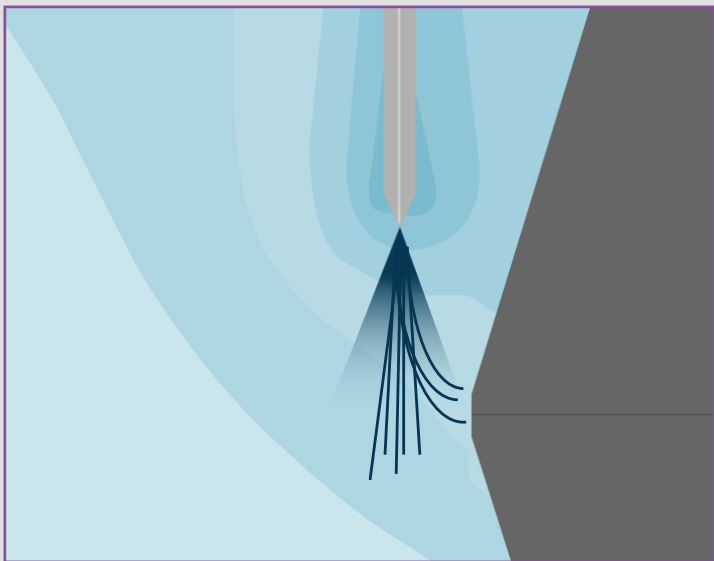
SCIEX 7500 System

E LENS™ TECHNOLOGY

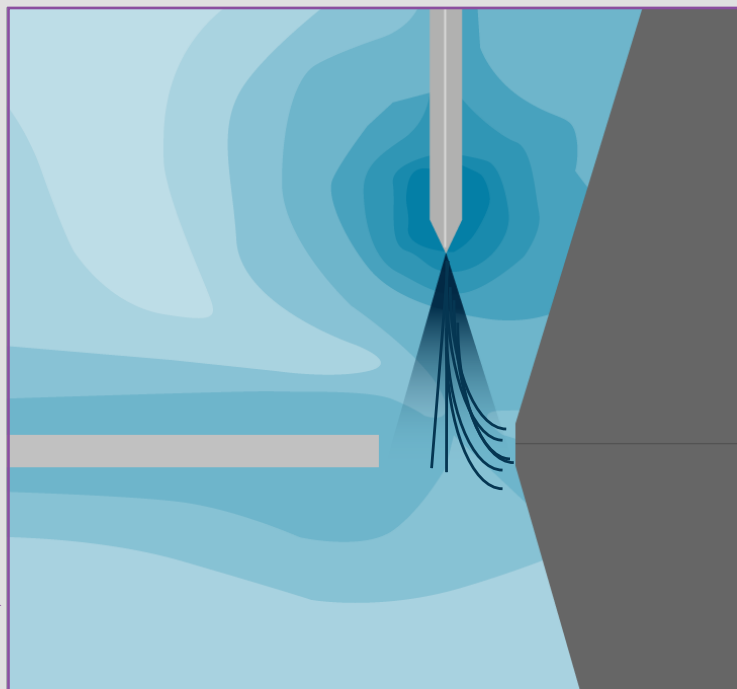
The E Lens Technology is a breakthrough innovation that further enhances the power and efficiency of the SCIEX Turbo V™ Ion Source geometry, which is integral to the OptiFlow Pro Ion Source.

The E Lens Technology creates an increased field strength near the instrument orifice, which improves ion collection efficiency and drives more energetic ESI droplet desolvation. This improves ion generation and sensitivity.

WITHOUT E LENS TECHNOLOGY



E LENS TECHNOLOGY



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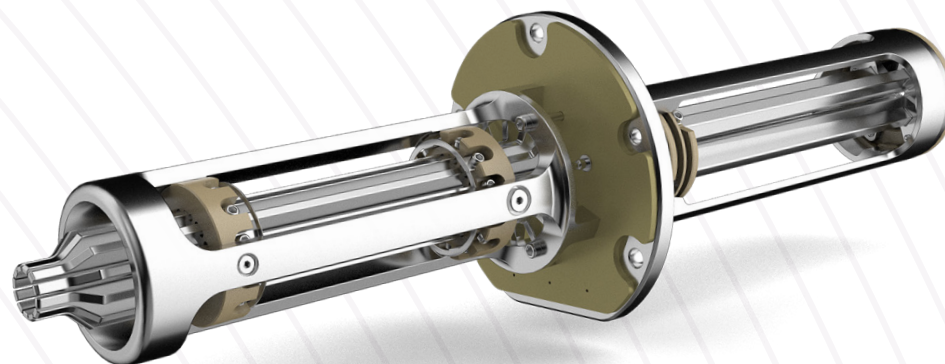


SCIEX 7500 System

D JET™ ION GUIDE

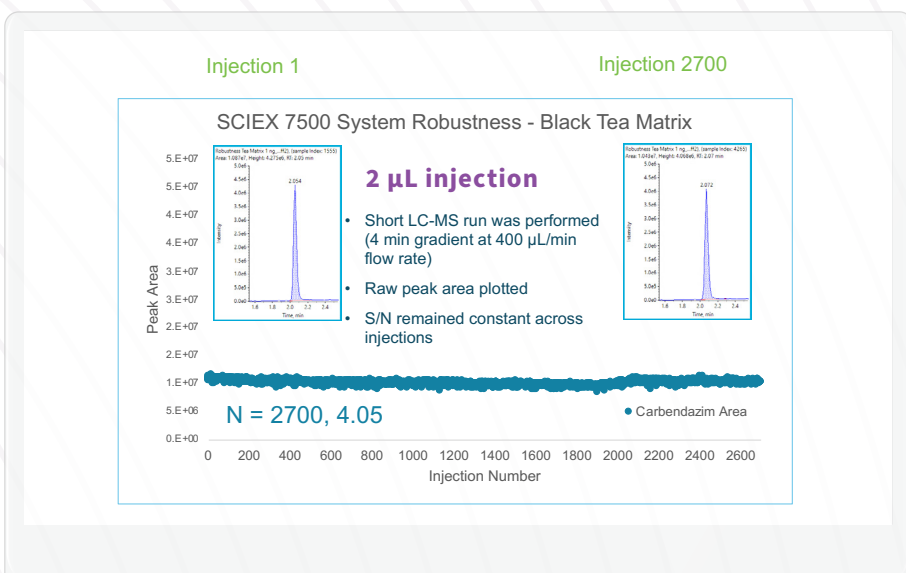
The D Jet Ion Guide incorporates the precise engineering and quality expected with all SCIEX products. Integrated into the SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready, the D Jet Ion Guide enables you to sample more ions, regardless of ionization type.

The unique design of the ion guide captures and retains more of the ion spray plume, enabling you to gain a more accurate profile of your sample. The D Jet Ion Guide collects the plume and concentrates the ions using radio frequency (RF) while removing the gas molecules and neutral ions.



The novel engineering of the D Jet Ion Guide bridges the pressure regimes throughout the optics of Q0, Q1, Q2 and Q3, supports consistency and stability for low-level detection. Combined with the OptiFlow® Pro Ion Source and E Lens™ Technology, the D Jet Ion Guide offers you greater sensitivity through sampling more ions.

Built on the SCIEX 7500 System, **GO BEYOND** with the D Jet Ion Guide and start detecting low-level trace analytes across many workflows and matrices.



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GO **BEYOND**



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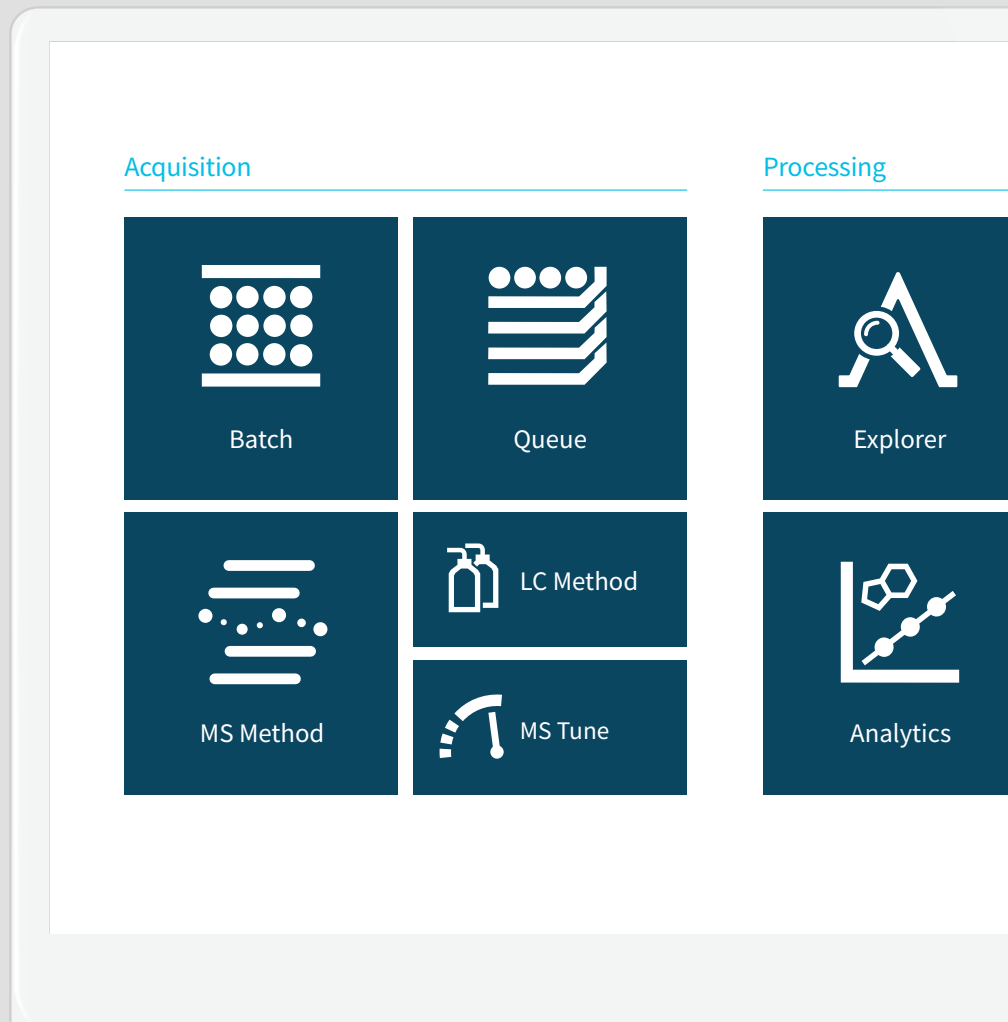
SCIEX OS SOFTWARE

Enter the next era of SCIEX mass spectrometers with SCIEX OS Software. SCIEX OS Software will expand your lab's potential to a new realm of efficiencies, compound analysis and sample testing.

SCIEX OS Software has evolved the key components of the Analyst® Software and added intuitive features to enable you to quickly analyze and represent your data in a compliant, intuitive format. Control, acquire, analyze, process, interrogate and report from an all-in-one software platform. Experience a second generation of peak modeling, which improves peak finding and integration. With Real Time Decisions actions on the queue, flag results as real-time analysis is performed. It's time to detect and correct actions on the sample queue immediately, with no sample loss or time. The outlier functionality simplifies calibration curve review.

Combine transparency and control to create the ideal security blanket for your laboratory. The software is complete with features and functions to operate in a 21 CFR Part 11 compliant environment. Access customizable tools that give you the flexibility to configure security settings to comply with your specific requirements. With SCIEX OS Software, you will have a GxP compliant LC-MS/MS software and a reliable validation support team behind you to get your SCIEX 7500 System up and running in your lab.

Get ready to **GO BEYOND** with the SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready powered by SCIEX OS Software.



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GO **BEYOND**



SCIEX 7500 System

QTRAP® READY

GO BEYOND your quantification workflows with additional scan types to get more data and information out of the same injection. The SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready expands the traditional MRM workflows with QTRAP Ready technology.

With an easy upgrade path from MRM, access linear ion trap scan features that will help you enhance your conventional triple quadrupole experiments. Not only will your workflows retain the accuracy and precision of an MRM analysis, but they are complemented with richer data.

Run an MRM experiment with a QTRAP scan such as MRM³, or an enhanced product ion (EPI) scan, without a drop in sensitivity of the instrument. The QTRAP functionality on the SCIEX 7500 System enables you to quantify your analytes to low trace levels and provide you additional data so that you can make confident decisions and interpretations of your sample data.

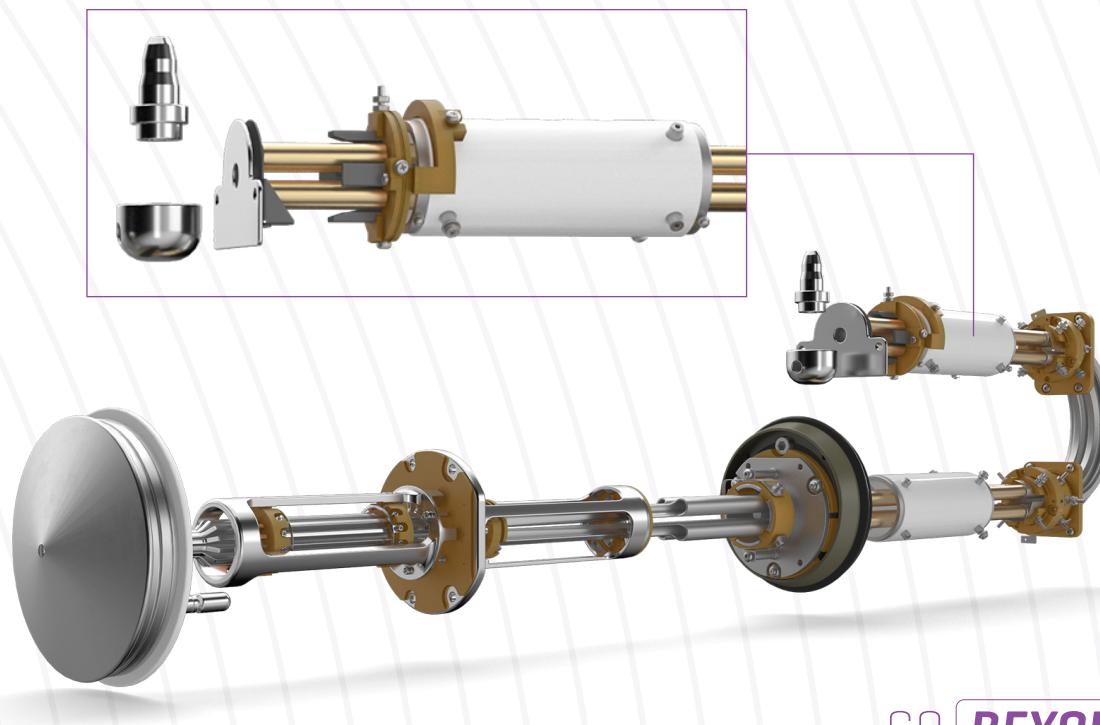
QTRAP SCAN TYPES

Enhanced product ion scan gives you greater confidence in your data. The enhanced product ion scan is a trap scan that can help you obtain a high-quality MS/MS spectrum on a specific ion.

MRM³ offers you better specificity and quantitative performance. This is an effective scan solution that removes high background and interferences and can achieve lower detection limits.

Enhanced MS delivers a highly sensitive full scan for the detection of unknown analytes.

Enhanced resolution can help you find and characterize components in your sample. The enhanced resolution scan mode allows high-resolution MS to be obtained for an ion of interest.



GO **BEYOND**™

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PHARMA AND BIOPHARMA

The rapid advancement of the drug pipeline has increased the focus on diverse therapeutic classes such as oligonucleotides and cell therapies. With this comes analytical complexities that expand beyond matrices, including cell, tissue and the usual biological fluids, and novel therapeutics. In addition to that is the challenge of extensive sample preparation and high background interferences while seeking lower limits of quantification.

The SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready provides an elegant solution to tackle many of these challenges. Take your sensitivity to the next level. The D Jet™ Ion Guide allows you to sample more ions, without a decrease in robustness. Get ready to attain lower levels of quantification and broader coverage, with a linear dynamic range spanning up to six orders of magnitude.

With the OptiFlow® Pro Ion Source, E Lens™ Technology and D Jet Ion Guide, the SCIEX 7500 System will give your laboratory sensitivity gains and flexibility to meet current and future analytical needs. **GO BEYOND** when quantifying those endogenous biomarkers, inhalants, cytotoxic payloads and reach the low level that patient-centric sampling demands.

GO **BEYOND**



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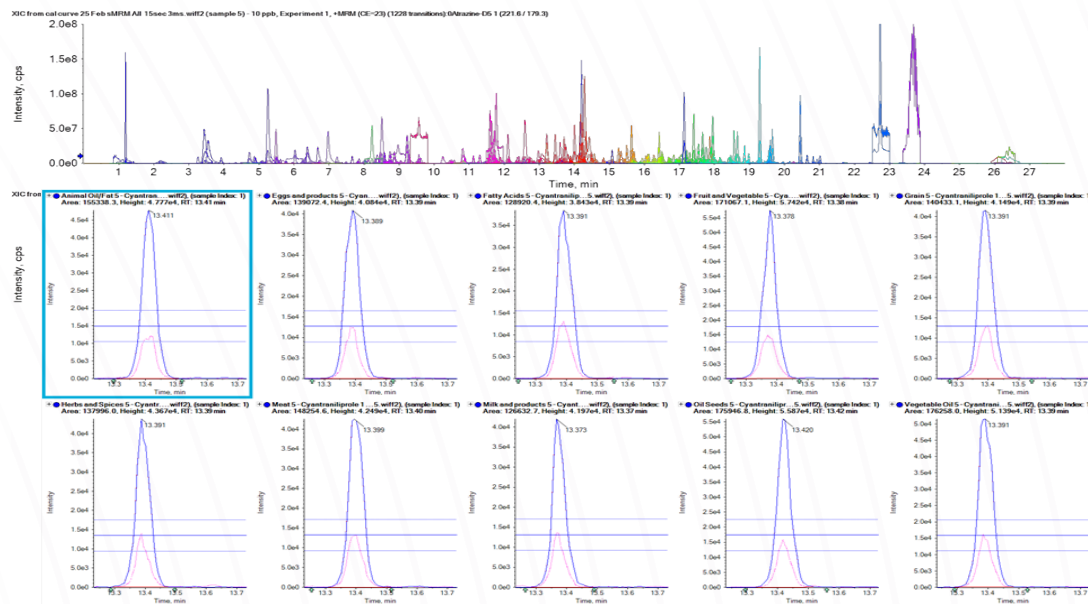
FOOD TESTING

GO BEYOND in the low-level trace detection of residues. Enter the new era of food safety and authenticity. The scope, relevance and level of food safety and authenticity regulations have pushed the need for sensitive analysis. The SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready powered by SCIEX OS Software offers you the sensitivity gains to detect the previously undetectable and quantify at lower levels with impressive precision.

Experience a new modularity feature and the reliability and efficiency of the legendary Turbo V™ Ion Source incorporated into the OptiFlow® Pro Ion Source. The integrated E Lens™ Technology built into the OptiFlow Pro Ion Source will boost the transition of crucial ions into the system to quantify a low abundance of analytes.

GO BEYOND current limits of sensitivity, throughput barriers, ruggedness and robustness challenges, and pave the way for your lab to enter the next generation of food testing. The SCIEX 7500 System is robust and rugged to analyze food matrices consistently, batch after batch.

The combination of high-throughput sample preparation procedures applied to 10 different food matrices and a robust detection workflow enabled impressive levels of accuracy, reproducibility and robustness for a variety of food products.





SCIEX 7500 System

CANNABIS AND HEMP TESTING

The legalization of medicinal or recreational marijuana and hemp has resulted in stringent regulations mandating safety and quality testing before customer consumption. These regulations include analytical chemistry and biological assays to quantify the potency of cannabinoids such as tetrahydrocannabinol (THC) and residual pesticides. These assays are often challenging as your laboratory needs to trace chemical residues at the lowest possible limit.

GO BEYOND the current testing regimes. The SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready can help you confidently achieve the low-level residue limits stipulated by regulatory bodies.

Improve the transition of sample extracts into the mass spectrometer with the integrated OptiFlow® Pro Ion Source that contains E Lens™ Technology. Start quantifying low abundance analytes. Expand your laboratory capabilities to test the dirty matrices associated with cannabis samples. The D Jet™ Ion Guide will allow you to characterize analytes that were once masked by matrices, without a decrease in robustness.

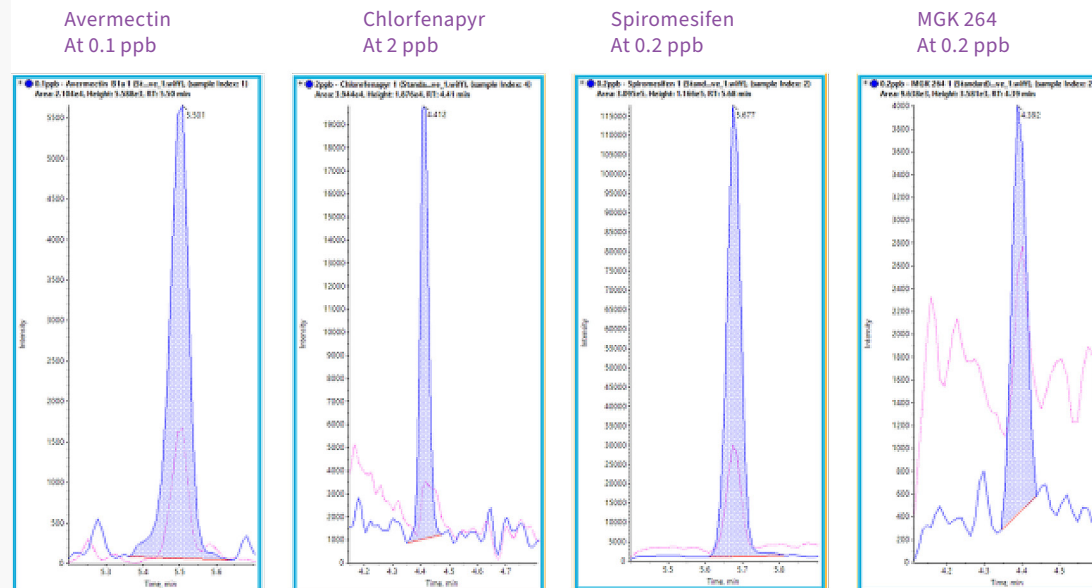
Powered by SCIEX OS Software, you can quickly interpret and report sample data. Using features like flagging and outlier tools, experience fast identification of non-conforming samples, which you can revisit for further investigation.

Get ready to **GO BEYOND** and start quantifying more trace analytes at lower levels.

GO **BEYOND**

Comprehensive trace level detection of regulated pesticides in cannabis extracts.

A 1uL injection was used



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ENVIRONMENTAL TESTING

GO BEYOND extensive sample preparation to achieve the ultra-low detection limits required by regulation. Enter the next era of analysis for water quality and environmental testing.

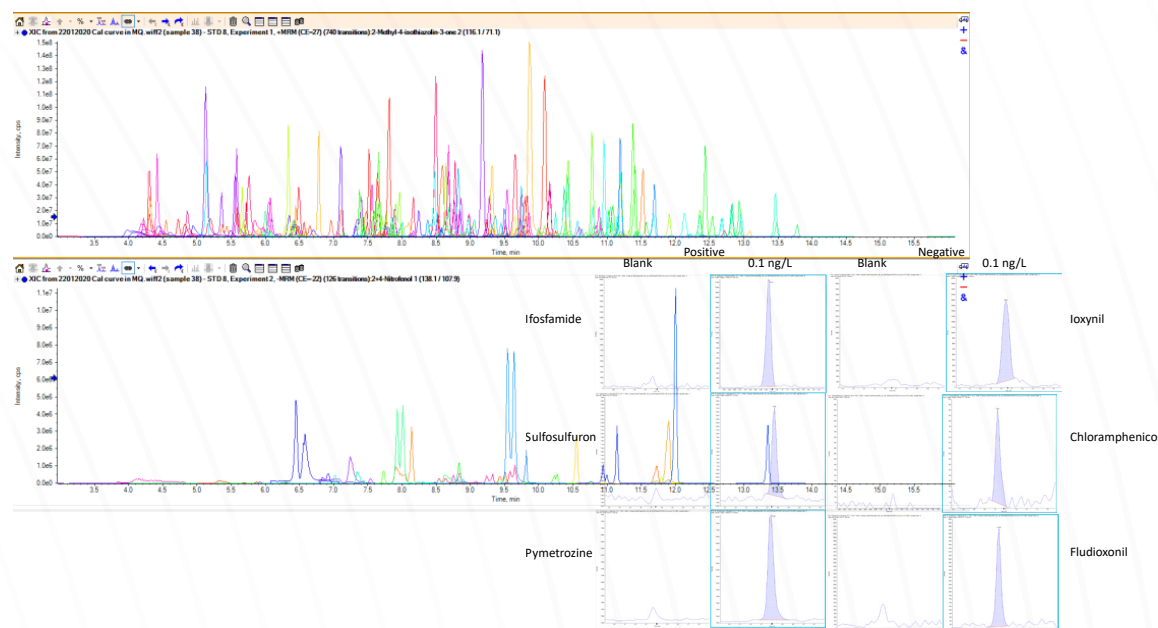
Whether it's pesticides, pharmaceuticals and personal care products (PPCP), or industrial and biological contamination, threats to water quality are pervasive. Water quality monitoring data is critical for detecting environmental pollution.

Expand your laboratory's capabilities to test dirty and complex samples, even analytes that were once masked by matrices, with the OptiFlow® Pro Ion Source built with the E Lens™ Technology and the D Jet™ Ion Guide.

Powered by SCIEX OS Software, the SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready will enable you to **GO BEYOND**. Get ready for your water and environmental analysis to reveal the full, detailed quantity of each contaminant or characteristic tested, as low as sub-parts per trillion.

GO **BEYOND**

Fast polarity switching on the SCIEX 7500 System enabled to obtain sub ng/L lower limits of quantification (LLOQ) for the PPCP compounds in the panel without compromising data quality.



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FORENSIC TESTING

Forensic toxicologists must present definite results of evidence. Any data that is reported must stand up to the scrutiny of the law, and your laboratory cannot risk otherwise. The SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready will help you **GO BEYOND** your current limits of sensitivity in the detection of forensic drugs in complex biological matrices.

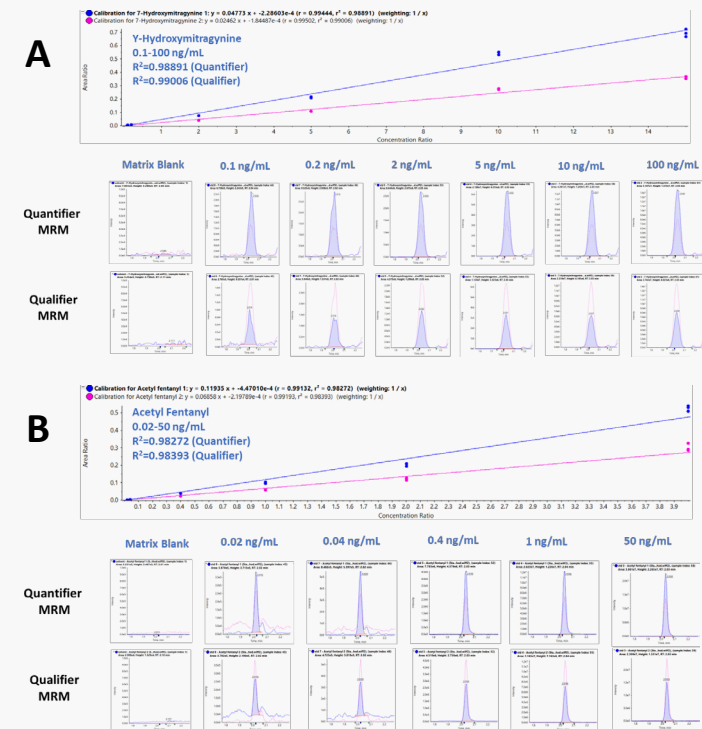
With the OptiFlow® Pro Ion Source integrated with E Lens™ Technology, it's time to expand your laboratory's capabilities. Get ready to detect the previously undetectable and quantify at even lower levels with impressive precision. The D Jet™ Ion Guide allows you to capture and retain more ions than with previous technologies, without a decrease in robustness. Experience sensitivity that helps you to quantify both low-level trace analytes and vastly abundant compounds in the same injection.

Powered by SCIEX OS Software, your laboratory is on the path to consistently deliver fast and precise results. The intuitive software is complete with functionality that can help to build high-quality methods, acquire and process data, and to review and report your evidence analysis efficiently.

GO BEYOND and successfully hit the moving target time after time in your forensic analysis.

GO **BEYOND**

The combination of the efficient sample preparation and the SCIEX 7500 System enabled to obtain sub ng/mL lower limits of quantification (LLOQ) for the vast majority of the compounds in the panel without compromising data quality.



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LIFE SCIENCE RESEARCH

As a life science researcher today, you are faced with an exceptional set of challenges. Driven to expand biological coverage to find the next biomarker and run larger cohorts than ever before. It is now crucial to be able to run more complex mixtures and quantify even larger numbers of analytes from a single injection.

The SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready helps enable new levels of quantification and faster translation of analytical information to biological knowledge. Built with a flexible ionization source; get full coverage of the diverse, multi-component analyses you require. At the same time, get the peace of mind knowing you can rely on the industry-recognized robustness of SCIEX Triple Quad Systems to protect your precious samples.

GO BEYOND current analytical challenges and meet future quantification needs with greater sensitivity and linear dynamic range spanning six orders of magnitude. With the OptiFlow® Pro Ion Source, life science researchers now have versatility for the breadth of compounds they might be asked to analyze. Together, E Lens™ Technology and the D Jet™ Ion Guide produce next-level sensitivity, extend linear dynamic range, and give access to even larger MRM panels.

CLINICAL RESEARCH

From substantiating discoveries to end-to-end validated workflows for high-throughput biomarker testing, the work you do as a clinical researcher is critical. Speed and robustness, coupled with accuracy, is the key to delivering results. The common theme is the challenge of discovering novel biomarkers and clinical-relevant analytes.

GO BEYOND discovery to verification and validation. Capture a multitude of information within a single analysis with a linear dynamic range spanning up to six orders of magnitude. The integrated E Lens™ Technology works within the OptiFlow® Pro Ion Source to achieve lower limits of quantification. Get ready to produce next-level sensitivity in complex biological matrices, including plasma, serum and urine, with the built-in D Jet™ Ion Guide. These new innovations reduce your sample volume and simplify your sample prep and decrease the need for invasive sampling .

Powered by SCIEX OS Software, the SCIEX Triple Quad™ 7500 LC-MS/MS System – QTRAP® Ready will enable you to **GO BEYOND** and put yourself on the path to pioneering discoveries in clinical research.

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SCIEX Now™ Support Network

The destination for all your support needs

Product & data security

Increase your confidence with compliance services to help you safeguard your data, confirm data integrity, and ensure system modifications can be traced.

Product & data security

Onboarding

We register you to SCIEX Now Online, enroll you to your SCIEX University™ learning path, and send you a welcome email.

Onboarding

Lab enhancement services

SCIEX Lab enhancement services apply a holistic approach to your lab to increase productivity and reduce system downtime.

Lab enhancement services

SCIEX University™

Best-in-class content, personalized learning paths—delivered using the latest memory science techniques.

SCIEX University training

Self-help resources

Our Knowledge Base and Community help you move your science forward and find the answers you need from SCIEX experts as well as your peers.

Self-help resources

Workflow support

Whatever your challenge, the SCIEX Support team is here to help you achieve your scientific goals quickly and efficiently.

Workflow support



Start Your Path to Success Now: sciex.com/sciexnow