



Revolutionary Sensitivity,
Speed, and Performance

SCIEX 6500+ SERIES MASS SPECTROMETERS



SCIEX 6500+ Series IonDrive™ Technology combined with Novel Detection System

Visionary sensitivity

The SCIEX 6500+ Series with IonDrive technology, improved detection system, and elevated SelexION®+ differential mobility separation technology device, merges outstanding sensitivity with renowned performance to give you the lowest limits of quantitation (LLOQ) for compounds of many classes, even in complex matrices, for robust and reliable results you can count on.

Intelligent by design

IonDrive technology is built into the system, from the ionization source, through the ion-focusing region, all the way to the new and enhanced high energy detector, increasing the number of ions produced, the efficiency of ion transmission, and the way ions are detected. The addition of SelexION+ with new Jet Injector technology adds an additional boost in performance when added selectivity is required.

Analysis without compromise

The enhanced robustness and up to 6 orders of dynamic range, significantly increases the breadth of applications possible with the 6500+. From small molecules to large molecules, and across polarities, the 6500+ Series delivers sensitive quantitative results without compromise.

Further, the newly enhanced SelexION+, is proven to deliver the added selectivity you need without compromising LLOQs.

QTRAP® for your most challenging questions

Driven by proven Linear Accelerator™ Trap technology, the QTRAP 6500+ system enables enhanced MS/MS workflows even with UHPLC approaches. And, for complex samples, the selectivity of the MRM³ workflow significantly enhances data quality while reducing the need for added sample preparation.



IonDrive™ Technology – Pushing the Sensitivity Barrier

SCIEX has been designing MS instruments for the past 40 years. Each platform introduced is the culmination of years of research and development in improving sensitivity, accelerating throughput, and enhancing data quality. IonDrive technology with the enhanced high energy detector and SelexION®+ technology built into the new 6500+ Series LC-MS/MS systems pushes the boundary even further.

IonDrive technology simultaneously targets three critical areas of enhancements in the 6500+ Series, ruggedly driving best-in-class performance improvements and unrivaled sensitivity in three key components of the system:

- The production of more ions with the optimally designed IonDrive™ Turbo V source
- The capture and transmission of more ions with the unique IonDrive QJet® guide
- The detection of more ions with the enhanced IonDrive High Energy Detector†

IONDRIVE™ TECHNOLOGY – DRIVING PERFORMANCE



IonDrive™ Turbo V source



IonDrive™ QJet guide



IonDrive™ High Energy Detector†

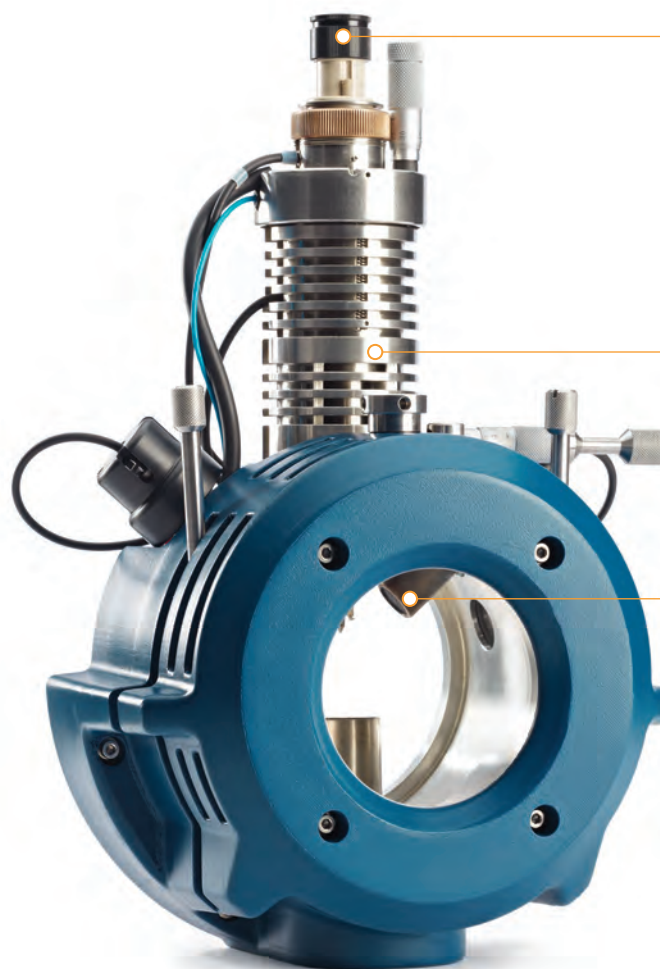


Produce More Ions
Capture More Ions
Detect More Ions

Sensitivity and Ruggedness

IonDrive™ Turbo V source

Get more sensitivity without sacrificing robustness and ruggedness through enhanced gas flow and optimized heater configuration compounded with the legacy Turbo V design.



The IonDrive Turbo V source maintains the quick-change APCI and TurbolonSpray probes as well as adaptability to the new low dispersion electrodes for use with microflow UHPLC methods.

From 5 $\mu\text{L}/\text{min}$ to 3 mL/min , the IonDrive Turbo V source is the perfect match for narrow bore, standard bore, and UHPLC flow rates.

The enhanced gas flow dynamics and optimized heater configurations deliver improved reliability, reproducibility, and robustness.

The Tool to Take on Your Most Challenging Assays

The 6500+ system is designed to produce more ions, transmit more ions, and detect more ions. The optional QTRAP® technology offers the added value of both simultaneous qualitative screening and reliable quantitation in a single injection.

Increase confidence

QTRAP® technology

Boost selectivity for added confidence in your most challenging assays with enhanced mass spec scanning modes that deliver MRM and so much more. Take advantage of 20,000 Da/s scan speed and full scan linear ion trap sensitivity improved by 100x over the Triple Quad system for greater confidence in quantitative workflows.

Detection without bias

IonDrive™ High Energy Detector*

Get consistent and reliable quantitative results for all ions, regardless of polarity, chemistry, and concentration, all in a single injection.

More MRMs per injection

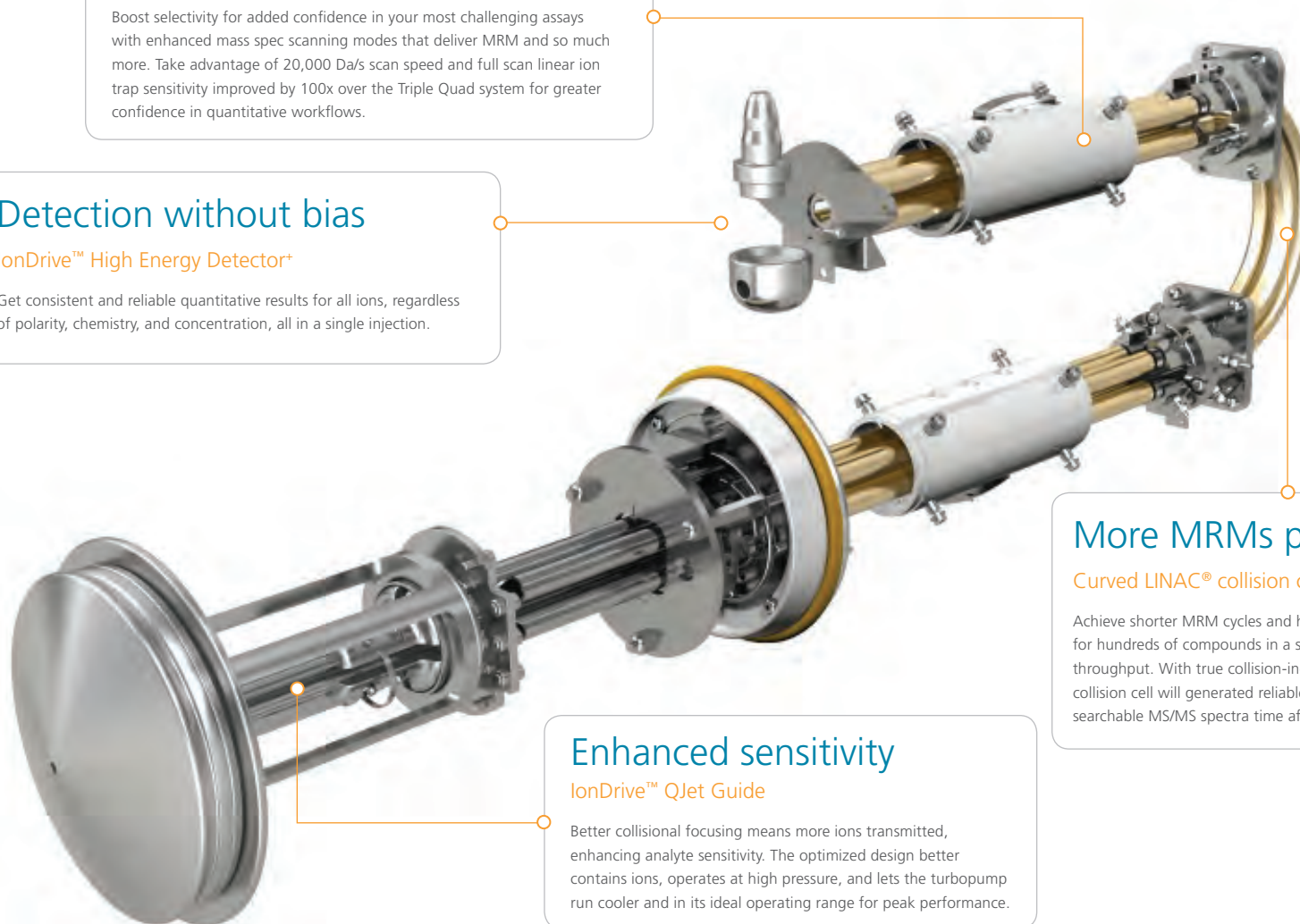
Curved LINAC® collision cell

Achieve shorter MRM cycles and higher scan speeds to analyze for hundreds of compounds in a single injection for improved throughput. With true collision-induced fragmentation, this collision cell will generate reliable, information-rich, library-searchable MS/MS spectra time after time.

Enhanced sensitivity

IonDrive™ QJet Guide

Better collisional focusing means more ions transmitted, enhancing analyte sensitivity. The optimized design better contains ions, operates at high pressure, and lets the turbopump run cooler and in its ideal operating range for peak performance.



The SCIEX Triple Quad™ 6500+ System

Ultra-sensitive and robust
for definitive quant

The Triple Quad 6500+ system delivers ultra-low limits of quantitation with significant enhancements in everything from ion production, to ion focusing and transmission, and through to detection. The results speak for themselves.

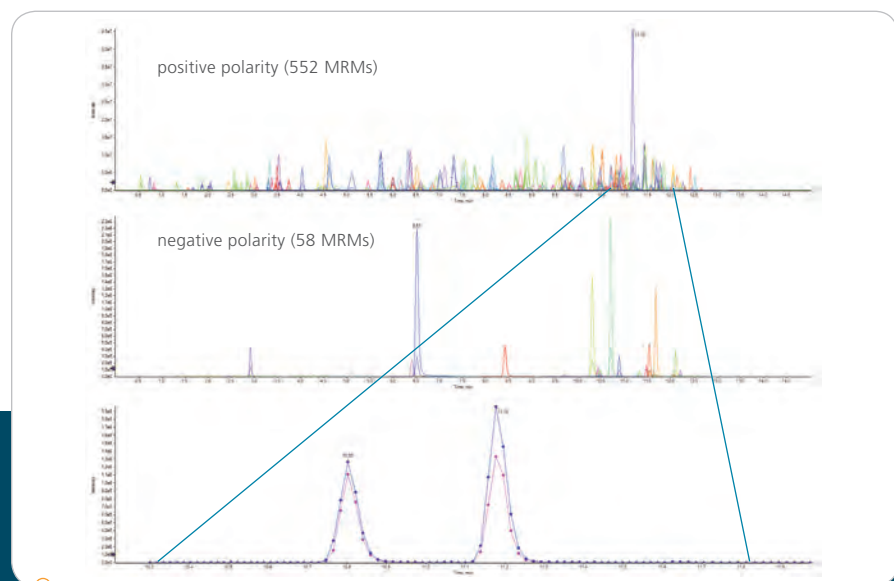
- Best in class MRM sensitivity
- Up to 6 orders of linear dynamic range for excellent quantitation
- 2000 m/z upper mass limit
- Verified inter- and intra- instrument robustness with the IonDrive™ Turbo V source
- Optimized UHPLC strategies with scan speeds of up to 12,000 Da/sec, to acquire more data points per peak
- Increased throughput with polarity switching speeds of 5 ms
- Improved selectivity with SelexION®+ differential ion mobility technology



Continuous Improvement in Ultra-trace Level Quantitation

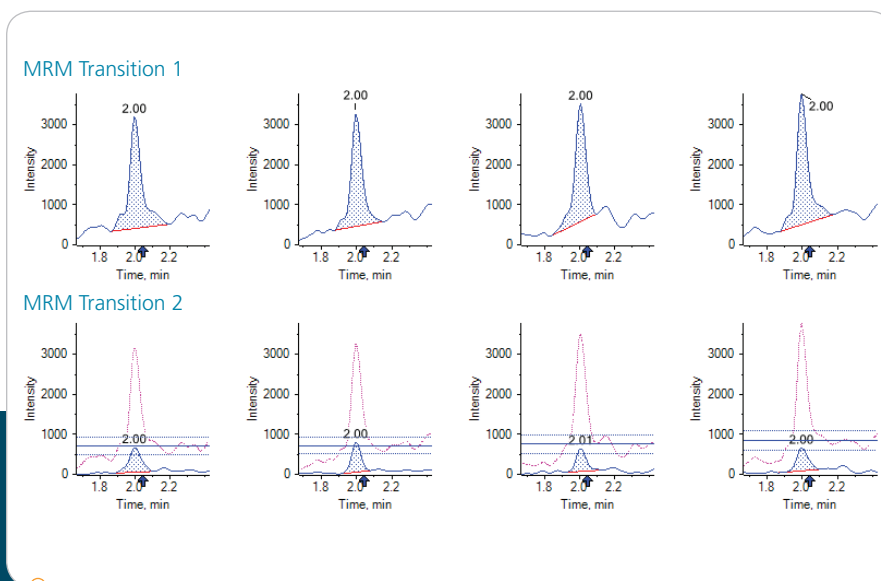
Enhancing LOQs for the most challenging analytes

The newly enhanced High Energy Detector⁺, with an increased detection area, new high voltage power supply, and floated design, delivers significant performance improvements, enabling even lower limits of quantitation for challenging analytes that ionize in both positive and negative modes, as well as improving switching between modes to quantify more compounds in each injection.



Extended compound detection in a single run

Ultra-fast polarity switching at rates as low as 5 ms combined with *Scheduled MRM™ Pro* algorithm provides exceptional detection of 100s of compounds, regardless of ionization polarity, in a single injection. Acquisition speeds are fast enough to deliver sufficient data points across chromatographic peaks for accurate quantitation even in areas with many co-eluting peaks.



Ultra-trace detection of ions in both positive and negative ESI

Analytes of all shapes, sizes, and polarities are no match for the 6500⁺. Low level detection of perfluoroalkyl acids including perfluorooctanoic acid (PFOA) (shown here) in drinking water at levels of 1 ng/L, with CVs less than 8% and excellent quantitative linear dynamic range is easily achievable.

Enhance Your Methods with QTRAP®

Evolved functionality for accelerated performance

See the full MS/MS picture for every MRM

When combined with the QTRAP technology, the 6500+ Series delivers the MRM sensitivity you need for quantitation, with added 100X increase in full-scan sensitivity over basic triple quads. The combined Triple Quad and Linear Ion Trap scan functions provide unrivaled levels of confidence by complementing sensitive MRM detection with enhanced product ion, complete MS/MS profiles for unequivocal identification.

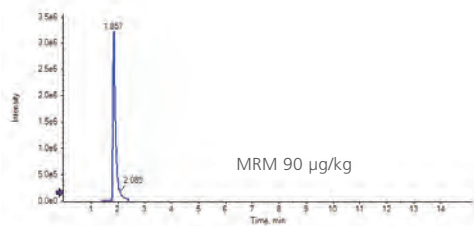
MRM³ – a generation of quantitation without interferences

When high background or challenging co-eluting interferences make standard MRM quantitation difficult, enhanced quantitative selectivity is a mouse click away with MRM³. The QTRAP 6500+ system enables MRM³ scans that are twice as fast as previous generations of QTRAP technology, enabling faster chromatography.

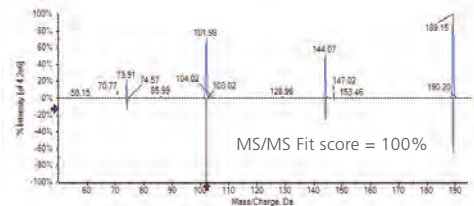
Automated MRM³ method method-building scripts makes parameter definition effortless while also making the MRM³ workflow a fast, reproducible, and easy way to increase throughput.

Enhanced selectivity in compound identification with MS/MS

Propamocarb from cucumber using MRM



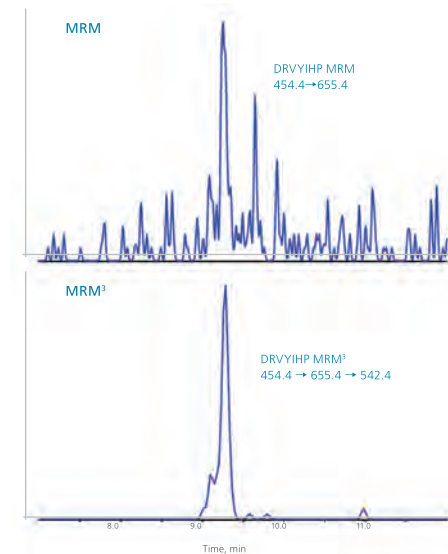
Propamocarb from cucumber using MS/MS



QTRAP technology enables collection of high quality MS/MS spectra in addition to MRMs to enable library comparisons for better confidence in compound identification.

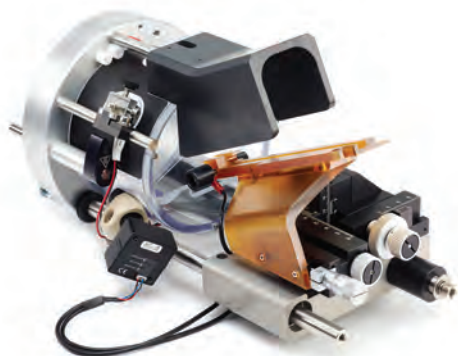
The MRM³ workflow can often provide higher specificity and therefore better LLOQs in complex matrices over MRM workflow alone, as shown here for the heavy labeled peptide DRVYIHP in digested human plasma.

MRM³ for enhanced peptide quantitation



Front-end Solutions for Your Most Challenging Assays

Regardless of the challenges encountered in the development of your assays, you can have confidence that the 6500+ Series has the tools you need when you need them.



Nanoflow made easy:

The NanoSpray® III source makes working with nanoflow chromatography easy while providing the highest sensitivity and stability. The NanoSpray III source supports regular and column-packed emitter tips for ultimate chromatographic flexibility. The camera design allows clear spray visualization for simplified optimization. Finger-tight fittings enable you to change tips quickly, so you are up and running in no time.

See what you have been missing:

The PhotoSpray® ionization source is a completely self-contained ionization source that expands the range of compounds you can analyze to include low-polarity polycyclic aromatic hydrocarbons.

Double your productivity:

The optional DuoSpray™ source contains the TurbolonSpray® and APCI probes in one housing with computer-controlled switching, allowing you to optimize ionization techniques and conditions for each compound during an LC run. It's ideal for fast method development as well as increasing throughput and data quality.

A World of Options – a New Dimension in Selectivity

Differential ion mobility
separation

The newly enhanced SCIEX SelexION®+ Technology with Jet Injector technology has been redesigned for improved transmission in ion mobility detection. More ions + less noise = sensitivity delivered.



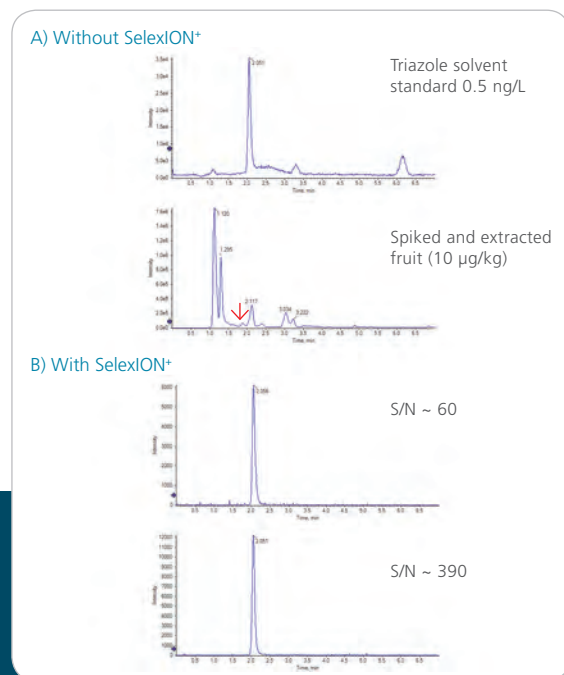
Improve data quality and enhance selectivity for challenging samples that require advanced analytical separations. The 6500+ Series with SelexION+ technology is the ideal development suite for any application requiring the separation of isobaric species, isolation of challenging co-eluting contaminants, and reduction of high background noise.



Added Selectivity without Compromise

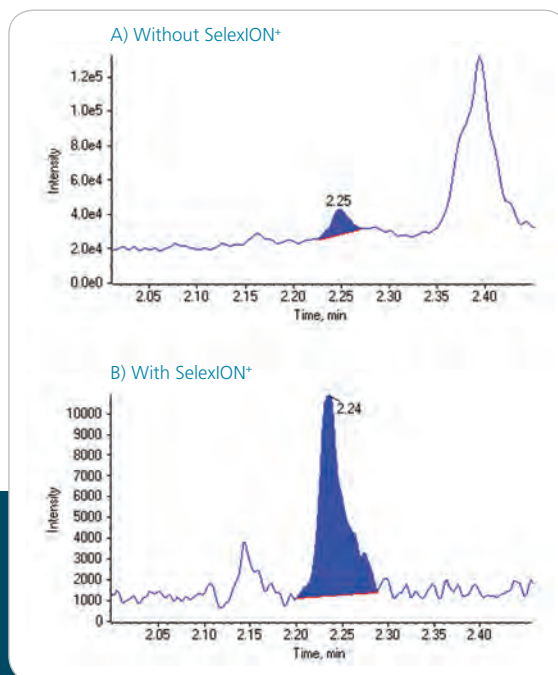
Improved SelexION^{®+} with Jet Injector technology

Add selectivity with ion mobility without sacrificing limits of quantitation or dynamic range. The re-designed SelexION⁺ with Jet Injector technology improves ion transmission efficiency for large and small ions alike.



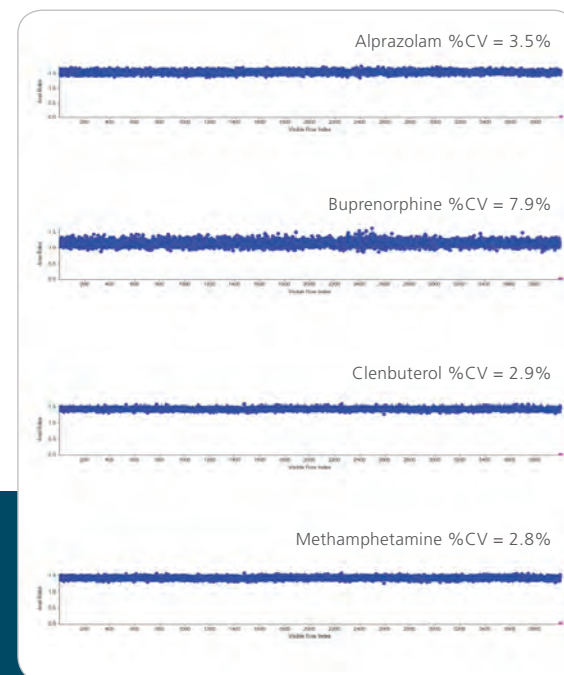
Enhanced selectivity for small molecule quantitation

The power of SelexION⁺ technology is most notable when faced with the analysis of low level compounds in challenging matrices. Clear reduction of matrix interferences for Triazole analyzed in fruit samples was observed, with delivery of a highly sensitive peak clear of matrix interferences for more reliable quantitation.



Improving peptide and large molecule analysis

Ion mobility is no longer just for the small. Somatostatin, a cyclic peptide with poor MS/MS fragmentation, was analyzed in rat plasma. The utilization of SelexION⁺ for the analysis improved the S/N for the peptide by a factor of 4, enabling significantly improved quantitative results at 100 pg/mL.



Robust quantitation across 1000s of injections

The 6500⁺ with SelexION⁺ technology delivers reliable performance, around the clock. For the analysis of compounds in crashed plasma, peak intensities remained stable, with less than 5% CV for many compounds, across 4000 injections.

Analyst® Software

The validated environment designed for quantitation. Proven and accepted throughout the world.

The pedigree that defines regulated bioanalysis

Analyst Software is designed to be used as part of a 21 CFR Part 11 compliant system and has had over 12 years of experience, innovation, and acceptance by regulated laboratories world-wide behind it. Today, Analyst Software continues to deliver confidence and data integrity with every report and has become the most widely deployed LC/MS/MS software for drug discovery and development.

What makes Analyst different?

- Analyst service is built into the Analyst Software platform, so it stays running even when you log off Windows

- The unique Analyst Administrator Console provides multi-instrument, project-wide security from a single computer
- Configurable audit map prevents redundant or unnecessary event capture
- Network acquisition for efficient data storage and backup
- A defined Analyst project structure keeps all relevant data interlinked

Analyst service has a modular architecture, so that you can upgrade and validate what you need, when you need to. This avoids massive and expensive revalidation projects inherent to unified information management systems.

Professional validation services

The SCIEX Professional Validation Services team offers comprehensive validation services that cover the range of HPLC IQ-OQ, MS IQ-OQ, Software Validation, and a complete LC-MS PQ that integrates hardware qualifications and software validation. This provides you with a single, end-to-end system validation package – from the manufacturer of the equipment – that encompasses data management, disaster recovery/backup, and data system security.

The Gold Standard – Our Customers

“Analyst’s security settings are highly customizable ensuring we can meet regulatory and customer expectations for our daily data processing routines.”

DR. C. BRISCOE, SENIOR DIRECTOR,
US BIOANALYSIS, PRA INTERNATIONAL



One Touch Productivity

Powerful, workflow-driven software ties everything together to deliver a new benchmark in efficiency, throughput, and productivity.



Analyst®

Acquire the best data

Industry-standard Analyst Software for data acquisition utilizes the intelligent *Scheduled* MRM Pro algorithm to make method set-up 1000s of MRMs in a single analysis simple, with optimized parameters to ensure you get exceptional MS data quality in every analysis.



LipidView™

Lipid species characterized and quantified

Automated processing for lipid data, enabling identification against a lipid species database containing over 25,000 entries, semi-quantitation targeted searching and reporting.



MultiQuant™

MRM data processing made fast and easy

Quickly process data sets containing many samples and many MRMs with powerful integration algorithms and flexible exporting and reporting.



MasterView™

Simple compound screening and identification

The intuitive interface enables simplified screening of your MS/MS data against compound libraries, efficient data review, and productive qualitative exploration to get answers fast.



ProteinPilot™

Streamlined protein ID and quant

Identify hundreds of peptide modifications and non-tryptic cleavages, distinguish isoforms, suppress false positive results, and quantify proteins and peptides across many samples simultaneously.



DiscoveryQuant™

Automated quant for drug-like molecules

Reduce tedious method development time with automated, efficient, and rapid LC-MS/MS drug candidate screening workflows.

Your Success is Our Success

We take it personally

As a SCIEX customer you have access to a world-class customer support organization. Wherever you are, we're there with you as a trusted partner to answer questions, provide solutions, and maximize lab productivity.

Our customer support organization has access to the latest product updates, software revisions, methods and repair procedures to make sure that you stay on top of your game.

When you have questions, we have answers.

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Answers for Science.
Knowledge for Life.™

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