A new dimension in selectivity

SELEXION™ ION MOBILITY TECHNOLOGY

AB SCIEX

Discover a new dimension of selectivity

Advanced performance

AB SCIEX SelexION™ ion mobility technology is an effective ion mobility separation tool for improving data quality in the quantitation and characterization of challenging samples requiring advanced analytical selectivity.

Enhanced selectivity

SelexION™ delivers a new dimension of selectivity and performance for any application requiring the separation of isobaric species, isolation of challenging co-eluting contaminants and reduction of high background noise.

Transformational analytical power

SelexION™ brings unprecedented analytical selectivity and data quality improvements for your most challenging assays. It turns our most sensitive triple quadrupole and QTRAP® systems into our most sensitive and selective triple quadrupole and QTRAP®.

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Reproducible, robust and easy to use

SelexION™ supports highly selective quantitative and qualitative LC/MS/MS workflows with the AB SCIEX 5500 and 6500 series of Triple Quad™ and QTRAP® systems.

Bring a new dimension of selectivity, simplicity and cost-effective efficiency to your LC/MS/MS analysis

- Add differential ion mobility separation with a small, easily interchangeable unit
- Increase peak separation power further through use of the Integrated Chemical Modifier mode
- Meet bioanalysis standards for reproducibility and robustness
- Match cycle and run times with multi-component analysis and UHPLC time scales
- Easy to install – can be setup in less than 2 minutes
- On demand operation can be turned off and on as needed without removing hardware

AB SCIEX QTRAP® 6500 with SelexION™

Also available on the AB SCIEX QTRAP® 5500 and Triple Quad 5500 and 6500 systems.

SelexION™ – enhanced selectivity in an elegantly simple package

No other ion mobility separation tool has the reproducibility, robustness and ease of use to deliver highly selective and sensitive quantitative and qualitative analyses, within an UHPLC time scale and over multiple MRMs simultaneously – all on our most sensitive triple quadrupole and QTRAP® platforms.

SelexION Differential Ion Mobility Cell

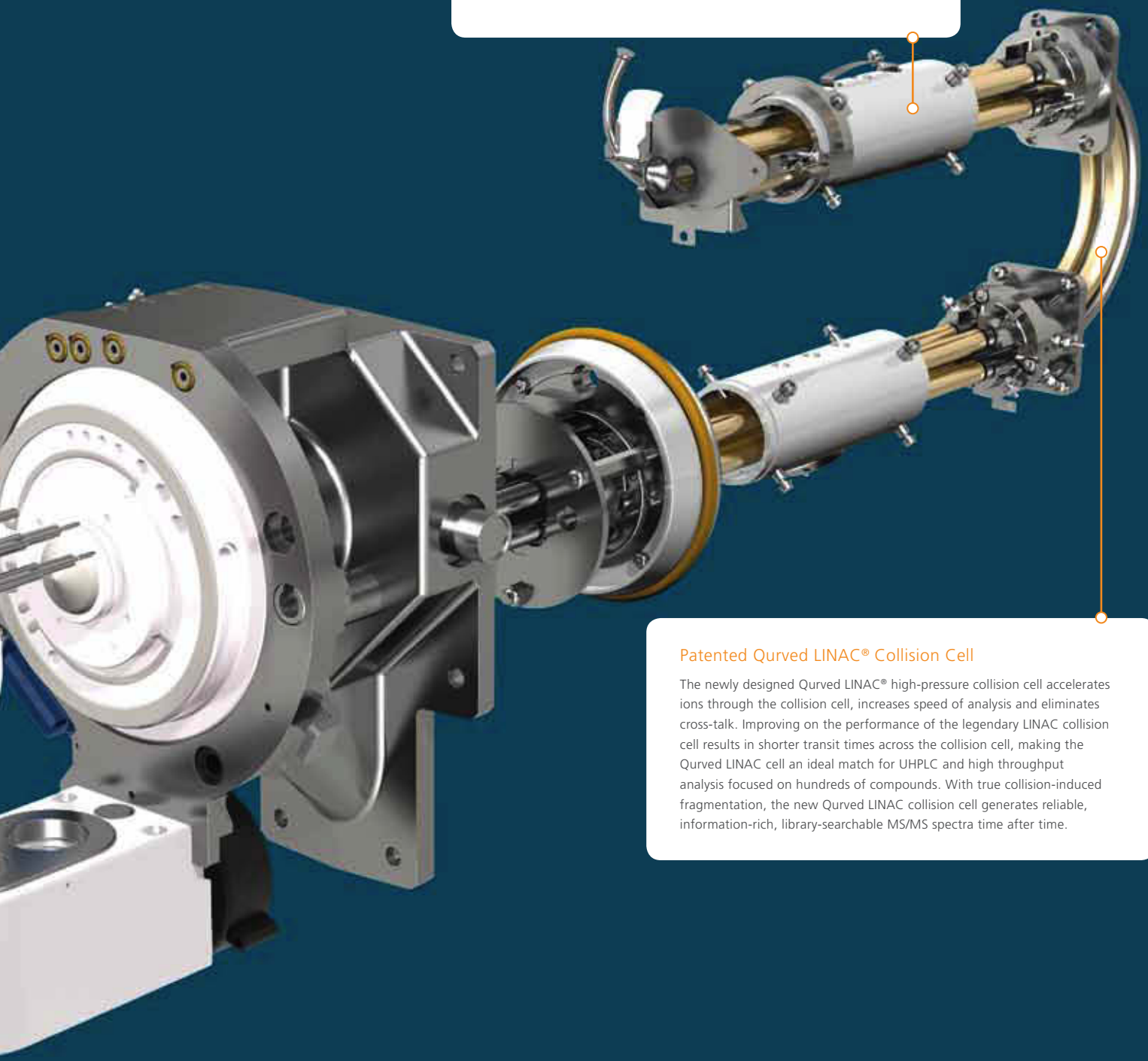
Compact and simple design allows the cell to be installed without the use of any tools and in less than 2 minutes.

SelexION Curtain Plate

Updated version of the traditional curtain plate to accomodate the differential ion mobility cell. Maintains the same level of robustness and stability associated with the original design.

Patented Linear Accelerator™ Trap

Bringing LINAC® technology to the Q3 linear ion trap greatly improves the extraction efficiency to yield up to a 100 x gain in sensitivity in ion trap scan modes. Now take full advantage of the 20,000 Da/s scan speeds without worrying if enough sensitivity is on board to generate incomparable results. Improved excitation efficiencies and reduced ion cooling and fragmentation times produce superior MS^3 qualitative results and provide unprecedented selectivity for the most challenging analytical assays.



Patented Qurved LINAC® Collision Cell

The newly designed Qurved LINAC® high-pressure collision cell accelerates ions through the collision cell, increases speed of analysis and eliminates cross-talk. Improving on the performance of the legendary LINAC collision cell results in shorter transit times across the collision cell, making the Qurved LINAC cell an ideal match for UHPLC and high throughput analysis focused on hundreds of compounds. With true collision-induced fragmentation, the new Qurved LINAC collision cell generates reliable, information-rich, library-searchable MS/MS spectra time after time.

New dimensions of selectivity and sensitivity

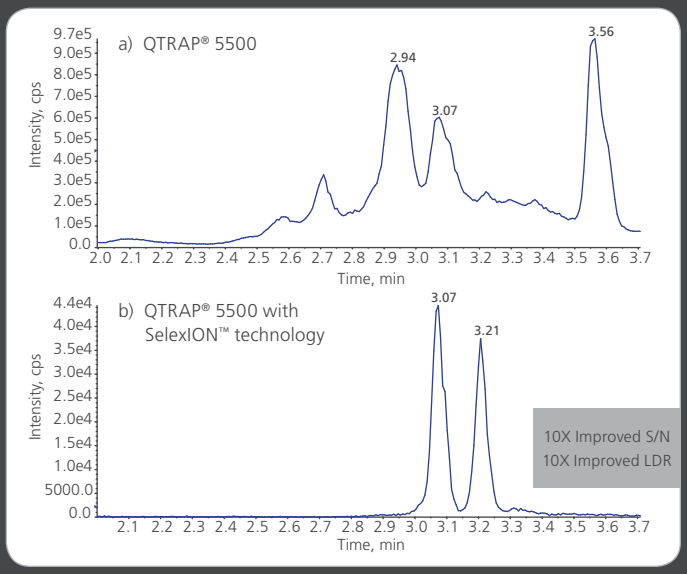
One simple package for isobaric species, co-eluting contaminants, and signal-to-noise improvements.

Challenged by assays with isobaric interferences and difficult to separate co-eluting contaminants? SelexION™ offers a fast, reproducible and easy-to-use solution that enhances the selectivity of your assays.

- Perform a gas phase differential ion mobility separation within the planar mobility cell based on the ion's size and shape prior to entering the mass analyzer where the compounds are further separated by m/z ratios
- Separate ions based upon the difference between their unique differential mobilities across high and low energy fields
- Conduct differential mobility separations of multiple MRMs, with a cycle time of 25 ms per MRM
- Enhance separation power with use of integrated chemical modifiers such as IPA
- Setup up or remove the device in two minutes – without breaking the mass spectrometer vacuum

A clear difference

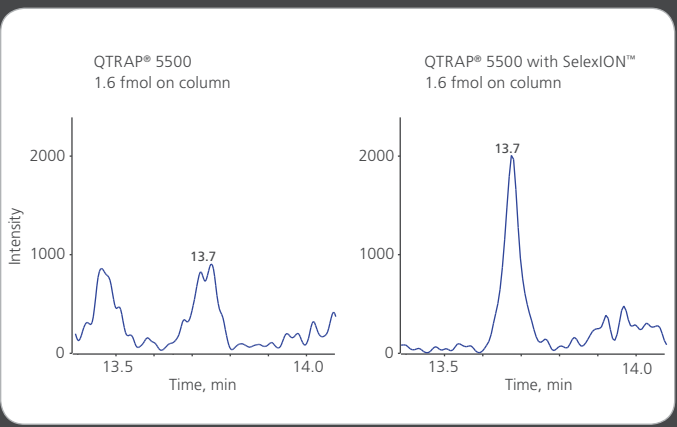
Eliminate high chemical noise in bioanalysis for pharmaceutical drug discovery and development.



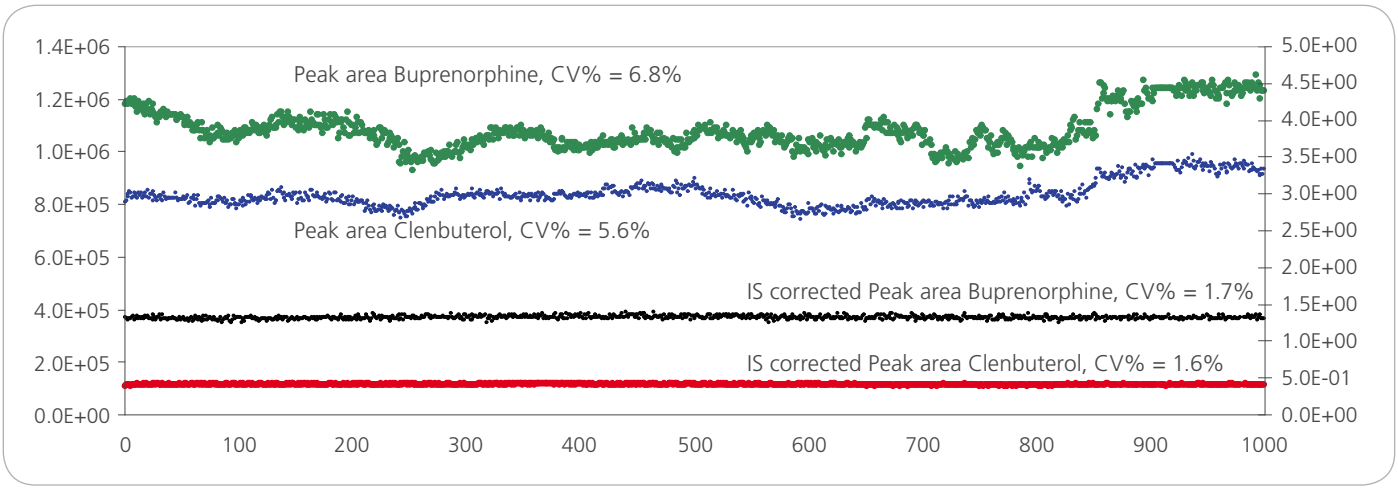
Injection of clenbuterol at 5 pg/uL in urine: (a) High chemical noise makes the detection impossible. (b) Differential ion mobility separation (DMS) increases selectivity and eliminates the high background producing a 10X improvement in signal-to-noise.

Background checked

Reducing background interferences from co-eluting peptides in complex digested matrices.



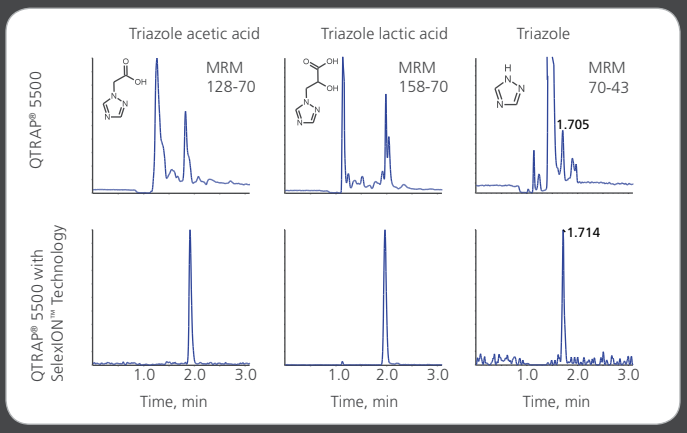
Stable isotope labeled synthetic peptides generated for quantitation of a therapreutic IgG in digested human plasma showed much cleaner MRM signals at the same on-column amount when a mobility separation was performed. This yielded a ~5x improvement in the LLOQ achieved on column.



The above figure of 1000 injections of spiked Buprenorphine and Clenbuterol in protein precipitated human plasma demonstrates the unique reproducibility, robustness and stability of SelexION™ in combination with the AB SCIEX QTRAP® 5500 System. A total of 66 hours of consecutive analysis produced a % CV of less than 7% in the peak area for both Buprenorphine and Clenbuterol.

Above the noise

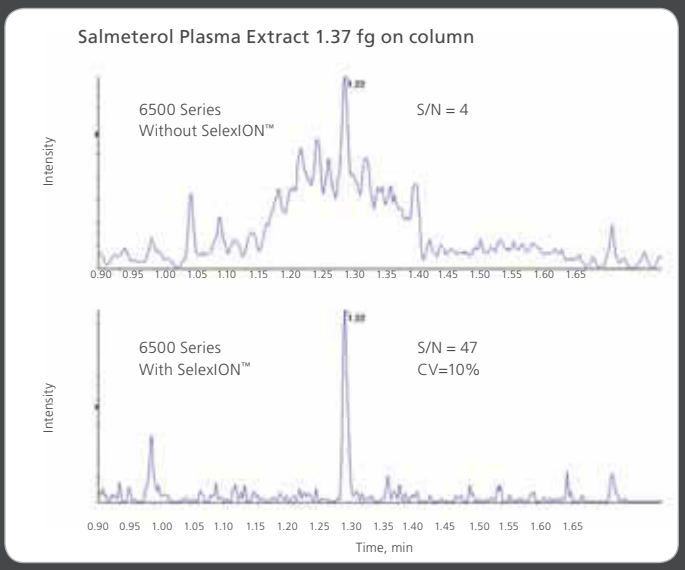
Significantly reduce and eliminate isobaric interferences and co-eluting contaminants.



Grape fruit extract fortified with conazole degradant products at 0.01mg/kg. Samples kindly supplied by R. Schoening, Bayer CropScience, Monheim, Germany, and J. Jasak, Technical University, Institute of Food Chemistry, Dresden, Germany.

Multiplied selectivity

Improve data quality and enhance selectivity for challenging samples that require advanced analytical separations.



Achieving real improvements in LOQ's for bioanalysis requires both sensitivity and selectivity. When combining SelexION with the 6500 series, results in instrument sensitivity show true gains for challenging bioanalytical problems, such as Salmeterol in plasma.

Your success is our success.

We take it personally.

As an AB 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.

The expertise of our service engineers covers the entire LC/MS system. Whether you need help with an ion source, an autosampler, or running an application, they can put your mind at ease. They understand that you can't afford downtime and need problems fixed fast. In fact, they do what it takes to make sure everything is working to your satisfaction and that your results look like they should.

Our application chemists specialize in making workflows flow. They can streamline your sample preparation and eliminate manual steps. They can help you develop methods for fast implementation and scale up for higher throughput. They can help you find ready-to-use iMethod™ Applications that get you up and running fast. They're also only a phone call away if you need help quickly.

When it comes to training, different labs have different needs. Our training specialists can design programs specific to your lab that make the experience as effective and efficient as possible. Choose from hands-on system training for LC/MS techniques or application-specific courses given by leading experts. You can also learn at your own pace with our e-learning modules.

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.

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Headquarters
500 Old Connecticut Path | Framingham, MA 01701 USA
Phone 508-383-7700
www.absciex.com

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