HUMAN HEALTH

ENVIRONMENTAL HEALTH

MEASURING HAS NEVER BEEN EASIER

Flexar SQ 300 MS

Verify. Quantify. Simplify.

PerkinElmer®
For the Better

BUILT TO OUTRUN.
ENGINEERED TO OUTPERFORM.

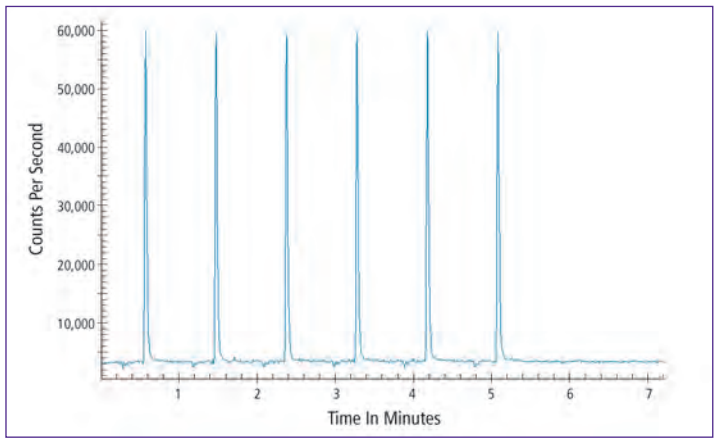
With today's ever more complex and demanding laboratory workflows, quality of data is everything. It's often no longer enough to determine simply what's in a sample; you need to measure precisely how much and in what form. And quickly.

Enter the Flexar SQ 300 MS.™

Ideal for a variety of analyses, this cutting-edge single quadrupole detector brings the unsurpassed sample insight of mass spectrometry to liquid chromatography applications. An integral part of PerkinElmer's acclaimed Flexar™ LC product line, the SQ 300 MS features a revolutionary interchangeable probe and unique multi-stage ion path for exceptional sensitivity. Its robust design is also capable of handling the most challenging workflows with long-term efficiency and reliability.

For some it's the ultimate QA/QC tool. For others it's an informative synthesis troubleshooter. And for others still it's an indispensable partner in the quantitative quest to know more about any given sample. But in every case, in every application, in every lab, the Flexar SQ 300 MS is the simplest route to exactly the information you need.

The Flexar SQ 300 MS from PerkinElmer. The latest advancement to help you verify, quantify, simplify.



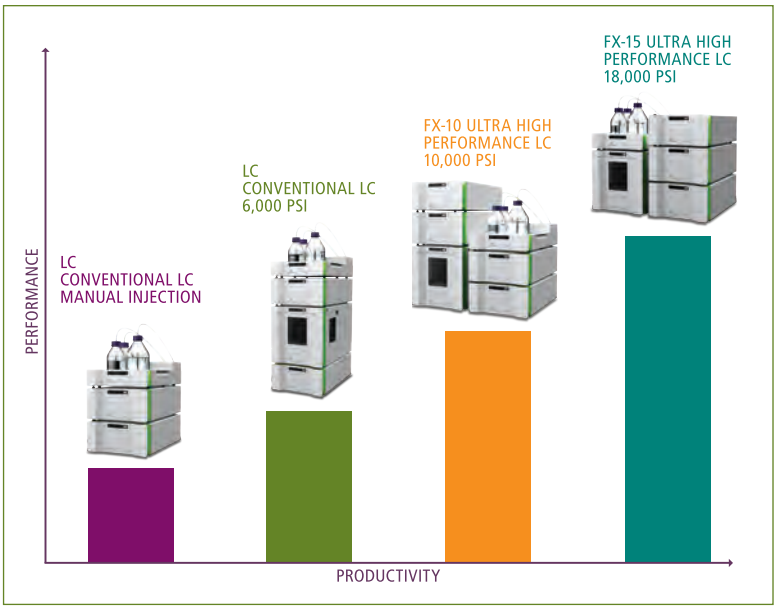
Reproducible performance at high sensitivity allows accurate quantitation. 6 replicate injections of 1 pg of Reserpine in ESI + mode at 400 µl/min. Shown here at signal/noise of 325:1 at SIM 609.2 @ 0.6 FWHM.

ACCURATE IDENTIFICATION STARTS WITH SUPERIOR SEPARATION.

Create the ideal system with the front-end flexibility and power of the Flexar LC platform.

The Flexar SQ 300 MS detector has been designed for seamless integration with the Flexar family of LC solutions. With a global reputation for robust performance and superior chromatographic separation capabilities, the Flexar platform offers an unparalleled level of configuration and application flexibility.

The Flexar line offers the perfect high-performance front-end LC solution to complement the sensitivity, speed and sample insight of the Flexar SQ 300 MS. With the widest array of operating pressures and a full suite of stackable, modular LC technologies, Flexar makes it easy to create the ideal solution to suit your analytical needs.



Mix and match components to create the ideal configuration to suit your performance/ productivity requirements.

Exceptional chromatography coupled with an innovative, rugged single quadrupole mass spectrometer. It all adds up to the most application-focused LC system available.

Highlights

- Exceptional front-end chromatographic separation capabilities
- Flexible, modular components to suit any LC/MS analytical need
- Widest selection of operating pressures available to address your throughput needs

CUTTING-EDGE INNOVATIONS FOR SUPERIOR IONIZATION.

Patented technologies provide high quality spectra and more informative data.

The instrument's innovative ion source design enables effective nebulization, faster desolvation and superior ionization for unmatched sensitivity in LC/MS applications.

With a choice of three ion source options, the Flexar SQ 300 MS allows you to utilize the one that will best address your analytical needs:

- Ultraspray™ Electrospray Interface (ESI)
- Dual-probe Ultraspray2™ ESI
- Atmospheric Pressure Chemical Ionization (APCI)

No matter which source you choose, it comes with a unique interchangeable snap-in probe design that enhances operational flexibility and productivity. You can now use a separate probe for each application to minimize cross-contamination, or dedicate a probe to each user for increased control, speed and productivity, ideal for open-access environments.

Interchangeable snap-in probes allow dedicated use for specific applications, minimizing cross-contamination and enhancing productivity.

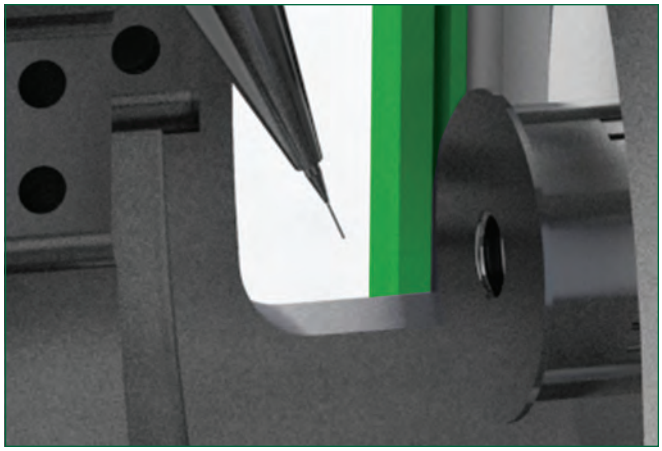
Cleaner source. Superior sensitivity.

In addition to the unique interchangeable probe design on the Flexar SQ 300 MS, the instrument also features a rugged, removable capillary cone. Both components can be quickly and easily swapped out for a particular application to minimize cross-contamination, enable the use of inorganic buffers, and provide the cleanest ionization environment possible for superior sensitivity and more accurate results. If and when the source does need cleaning, the entire housing can be removed, cleaned and replaced without shutting down the vacuum, dramatically increasing uptime and productivity compared to other systems.

Ultraspray Electrospray Ionization (ESI) Source.

The Ultraspray ESI on the Flexar SQ 300 MS offers extremely efficient, super-soft ionization to preserve the molecular structure of even the weakest compounds.

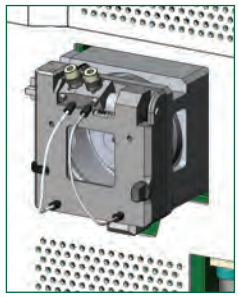
The unique angled design of the probe speeds the desolvation process, reduces neutral solvent clusters and allows superior ion transmission into the mass spectrometer system. The position of the probe can also be adjusted quickly and easily to optimize sensitivity and performance at any given flow rate.

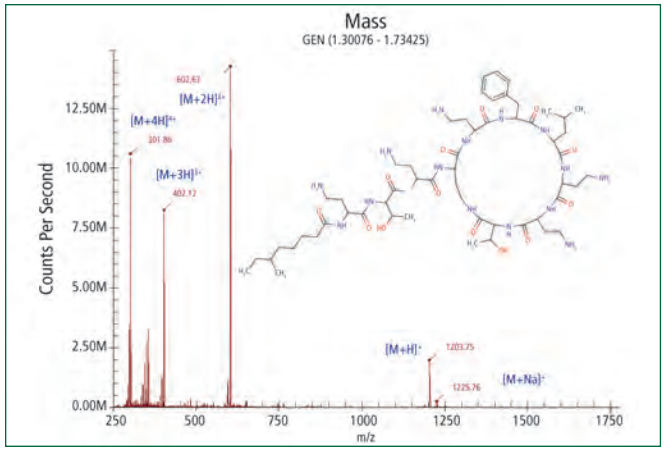


The unique angled probe can be easily adjusted to optimize ionization and ion transmission into the mass spectrometer no matter what the flow rate.

Ultraspray2 Electrospray Ionization (ESI) Source.

The dual-probe Ultraspray2 ESI option allows simultaneous connection of multiple analytical channels to your interface. With this design, one inlet may be used solely for calibrant, eliminating the time required to flush lines, and avoiding contamination of the sample probe.



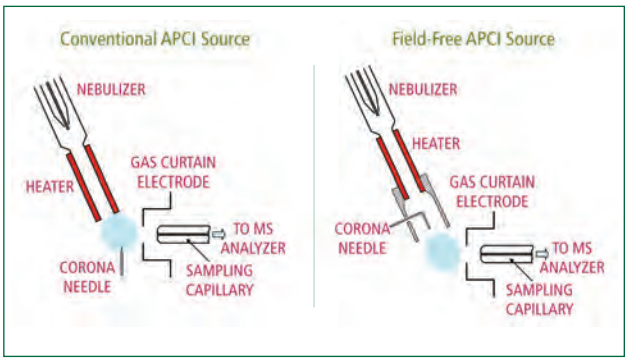


Pharmaceutical quality control may require detailed confirmatory analysis.

Example: Showing the molecular weight and multiple charged ion information of the antibiotic Polymixin B.

Field-Free APCI (Atmospheric Pressure Chemical Ionization) Source.

By offering high sensitivity even at very low flows—in both positive and negative ion mode—the Flexar SQ 300 MS Field-Free APCI ion source allows you to achieve optimum results while using less sample and solvent. It offers the best of both worlds in a single, efficient source that's both easy to tune and easy to use.



With its corona needle housed inside the probe and away from the capillary inlet, the APCI source on the Flexar SQ 300 MS eliminates the field created by conventional designs, producing less noise and more reliable results.

Unlike other systems that create a significant field (and chemical noise) by placing the corona needle between the probe and capillary inlet, our interface houses the corona inside the probe. This design not only removes the field, it also eliminates any associated optimization requirements for the needle or probe position for the simplest set up and operation.

The Flexar SQ 300 MS APCI interface also differs from other systems by focusing the entire sample through the corona region to maximize ionization efficiency in a wide range of flow rates.

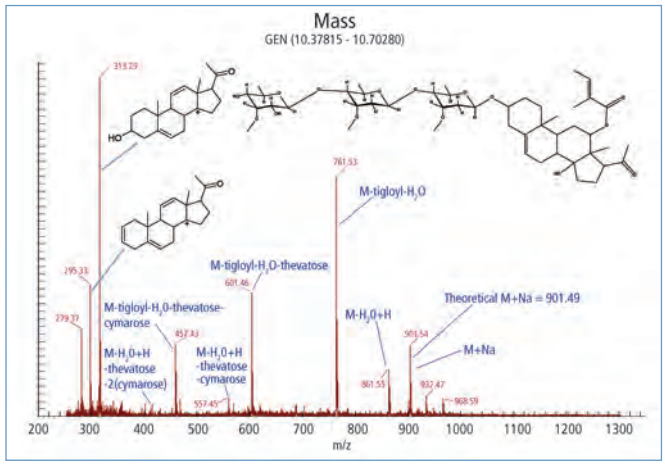
Highlights

- Range of patented ion sources to suit different chemistries and applications
- Interchangeable, snap-in probes minimize cross-contamination
- Source housing may be removed without shutting down the vacuum for unsurpassed productivity
- Removable capillary cone simplifies cleaning for enhanced uptime

ENHANCED ION TRANSMISSION FROM SOURCE TO DETECTOR.

Unique design delivers exceptional sensitivity and speed.

The Flexar SQ 300 MS features a patented capillary technology that efficiently drives molecules into the mass spectrometer. The voltage applied to the capillary exit can be precisely modulated to allow ions to flow freely or to collide and fragment through Collision-Induced Dissociation (CID). Ideal for obtaining more detailed mass-specific and structural information, CID can be performed more reproducibly and reliably than on any other system thanks to the desolvating efficiency of the instrument's ionization sources.

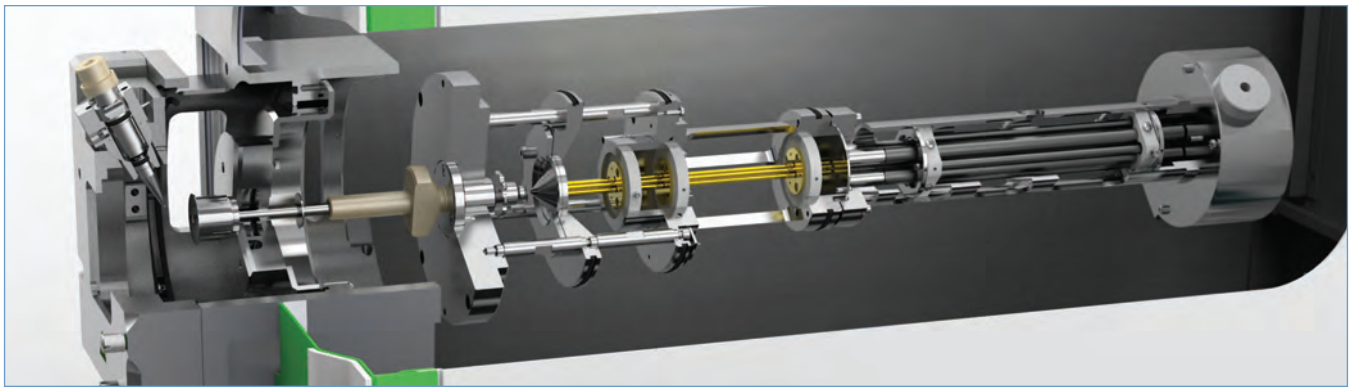


In nutraceutical development, identification and quantification of active compounds is the primary goal. Super-soft ionization and advanced CID capabilities deliver absolute confidence in your results.

Example: Detecting the presence of the active compound P57 in *Hoodia Gordonii* used as a herbal appetite suppressant.

Effective And Efficient Multi-Stage Ion Path.

Engineered around a unique multi-stage hexapole, the Flexar SQ 300 MS smoothly guides ions with a gradual three-step pressure drop to maximize transmission to the analyzing quadrupole and detector. The ion beam is further focused by a pre-filter before entering the quadrupole to ensure optimum performance, consistency and sensitivity.



Patented multi-stage ion path and state-of-the-art hexapole enhance ion transmission to a powerful analyzing quadrupole for superior sensitivity.

Powerful Analyzing Quadrupole And Best-In-Class Detector.

Easily controllable through the instrument's Chromera software, the analyzing quadrupole on the Flexar SQ 300 MS can be run in a variety of acquisition modes that can be mixed and matched to suit your data requirements for a particular run or application. Selected Ion Monitoring (SIM) and Scan mode can be run individually or in any combination, with positive or negative ionization, to deliver exactly the level of sensitivity and speed you need and to optimize the quality of your data.

High-speed electronics and quadrupole design combined with a digital pulse-counter detector offer exceptionally fast data acquisition rates. This ensures superior chromatographic peak resolution and complete spectral integrity even when the instrument is being used in conjunction with challenging UHPLC separations.

Highlights

- CID for detailed structural information provides reproducible confirmatory analysis
- Multi-stage ion path ensures superior ion transmission
- Acquisition mode flexibility delivers more comprehensive information for optimum data quality

A CHROMATOGRAPHY DATA SYSTEM THE WAY YOU WOULD DESIGN IT.

Instrument control and data acquisition are faster and easier than ever with Chromera.

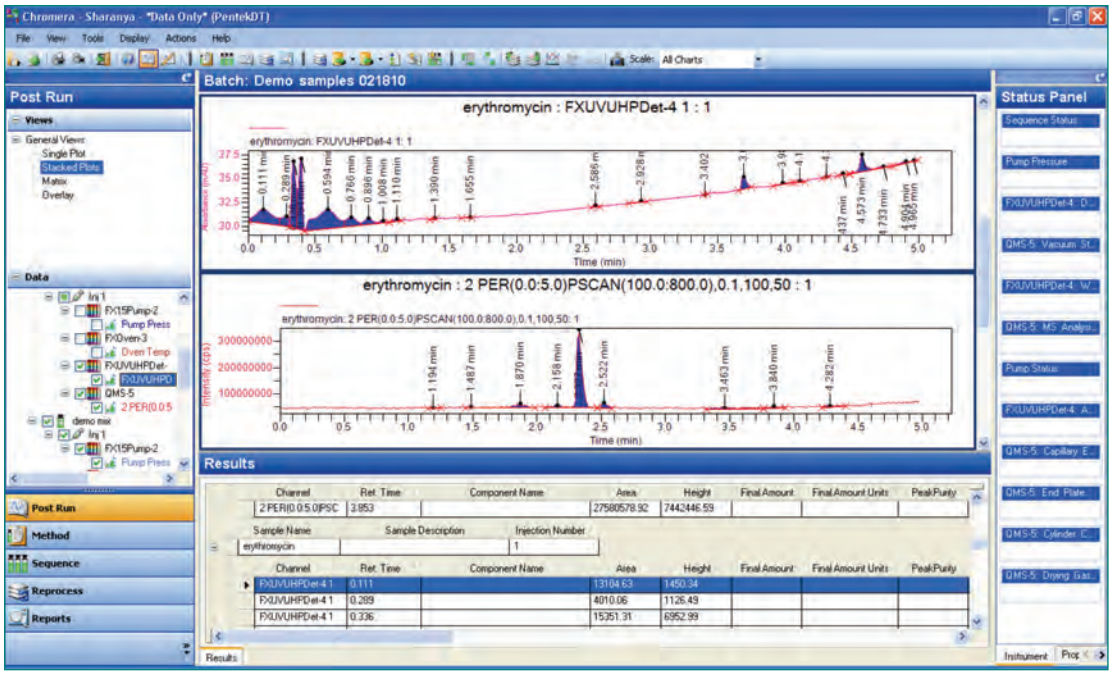
Complete control. Intuitive design. Fast navigation. Clear graphics. Relevant information. It all adds up to the most productive, application-oriented and user-friendly chromatography data system available.

Unmatched ease of use.

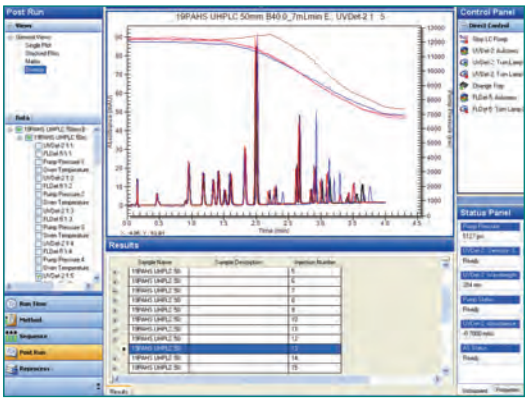
With a clear, intuitive workflow, Chromera® Chromatography Data System (CDS) simplifies each and every step of your quantitative analysis. All your tools and information are never more than a couple of clicks away so you can quickly and easily control every aspect of your Flexar SQ 300 MS system and generate information-rich data specifically targeted to your application. The software has a fast and easy one-click auto-tune function for reliable day-to-day operation and reproducibility.

Advanced functionality.

Chromera allows you to combine multiple acquisition modes in a single run for complete information on molecules with different ionization behaviors. Chromera CDS also allows you to combine information acquired in these different modes—and from different detectors—for advanced quantitation and more in-depth confirmatory analysis.



Chromatographic information for different detectors can be combined and analyzed for multi-channel quantitation.



By combining recorded pressure profiles and chromatographic data, you can easily identify outlying performance or analyze the degradation of an analytical column over time.

Highlights

- Intuitive workflow simplifies each step in your LC/MS analysis
- Fastest, easiest access to all tools and information of any CDS
- One-click auto-tune ensures reliable day-to-day operation and reproducibility

RELIABILITY EQUALS PRODUCTIVITY.

Optimize performance and validate results with a complete range of quality consumables.

PerkinElmer offers a broad array of consumables to enhance the operation of your Flexar SQ 300 MS and accompanying LC system. Tuning the instrument is simple with our proprietary calibration mixes, and specially formulated solutions make it easy to check the performance levels of your ESI in positive/negative ionization.

Mass spectrometry-grade vials, caps and septa give you complete sample handling flexibility and our wide range of columns—stretching from analytical to UHPLC in a variety of lengths and particle sizes—allows you to adapt your system to optimize the quality of your chromatography for any given application. We also offer a series of unique membrane nitrogen generators capable of supplying multiple instruments with pure, LC/MS-grade nitrogen to cut costs and enhance instrument performance.

Enjoy superior uptime with the industry's most respected global support network.

Nothing has a greater impact on productivity or ROI than instrument uptime. And no one does more to ensure your LC/MS system performs day in and day out than PerkinElmer. With OneSource Laboratory Services, you have the world's largest and most respected global service and support network at your disposal. Whether you need anything from application help to instrument care, our team of certified, factory-trained Customer Support Engineers is just a phone call away, 24 hours a day, seven days a week.

Operating in more than 150 countries worldwide, OneSource offers the most comprehensive portfolio of professional laboratory services in the industry, including complete care programs for virtually every technology and manufacturer. By allowing you to consolidate all your service contracts under a single supplier, and by providing responsive, expert technical advice and support at a moment's notice, we ensure your instrumentation—and your lab—is running at optimum levels at all times.

Whether it's care and repair, validation and compliance, asset management and laboratory relocation, software and hardware upgrades or education and training, OneSource is… the ONE you can count on.

PerkinElmer, Inc.
940 Winter Street
Waltham, MA 02451 USA
P: (800) 762-4000 or
(+1) 203-925-4602
www.perkinelmer.com

PerkinElmer®

For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

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