

HUMAN HEALTH

ENVIRONMENTAL HEALTH

# REACH FOR MORE CHOICES IN LC ANALYSIS



**FLEXAR™ Liquid Chromatography**  
Conventional LC / Ultra High Performance LC  
Flexar / Flexar FX-10 / Flexar FX-20

  
**PerkinElmer®**  
*For the Better*



NOW THERE'S  
A SOLUTION  
FOR ALL YOUR  
APPLICATIONS.



# CHOOSE EXACTLY THE SYSTEM YOU NEED

Does your lab require conventional LC or ultra high performance?  
6,000, 10,000 or 18,000 psi? PDA or Fluorescence detection?

With the flexible Flexar platform, you have a comprehensive range of choices at your fingertips. Not only do you get the widest selection of LC instruments, operating modes and performance levels, you can also choose from a broader offering of pumps, detectors, autosamplers consumables and support.

You also have flexibility in your CDS choice with either Chromera® or TotalChrom®. With the powerful, easy-to-use Chromera control and data handling software, you get increased range of configurations and the ability to fit your laboratory's application needs.

**Only PerkinElmer gives you the most complete line  
of LC solutions for all your applications.**



**FLEXAR LC / FLEXAR FX-10 / FLEXAR FX-20**



## FLEXAR FX-20



### Ultimate performance: More samples in less time

Ultra high performance means the highest resolution, highest sensitivity and fastest analysis – in other words, a superlative LC system. Flexar FX-20 is the ultimate in UHPLC with maximum throughput and minimum stress for you. Getting more sample information in less time lets you be more productive. Just what you want.

- **Dual-reciprocating piston 18,000 psi pump** provides as much as 10x or more improvement in productivity
- **Integrated piston wash function** keeps pump pistons clean, even with buffers
- **Synchronized injection with piston position** for ultimate retention time precision.
- **View pump pressure profiles real-time** with Chromera CDS
- **Pulse dampener-less design** allows for increased productivity with less recovery time between runs
- **Dual Binary solvent selection** adds more solvent choices to support your applications



FX-20 pump delivers precise flow for retention time repeatability.

### Reach for ergonomic efficiency

Everyone working with liquid chromatography recognizes the challenges of optimizing tubing connections between individual LC components. Flexar's elegant ergonomic design provides convenient and efficient tube management. Securing clips (highlighted in yellow above) in all four corners of every Flexar component assures maximum flexibility and optimized chromatography.

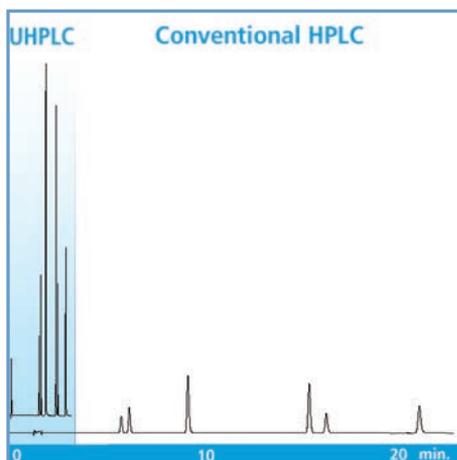


## FLEXAR FX-10

### High value or high performance? Now you can have both.

When the demands in your lab go up, but your budget doesn't, you need excellent performance at the best possible price. Flexar FX-10's 10,000 psi capability lets you increase your throughput while managing to your bottom line.

- Minimal disruption in your method development phase and analytical approach so you can easily port your existing methods
- Micro-binary 10,000 psi pump package
- At least 5-10x throughput improvements
- High-productivity FX UHPLC autosampler
- Peltier UHPLC column switching oven for retention reproducibility, viscosity reduction and high throughput
- High-speed PDA Plus™ (200 hz) with optimal 50 mm flowcell



Isoflavones in nutraceutical products can be analyzed with UHPLC over six times faster, with higher sensitivity, using over 90% less mobile phase solvent compared with conventional HPLC.

### Reach for greener productivity

Labs in every industry are concerned about the waste disposal, cost and shortage issues surrounding solvent consumption. PerkinElmer tackles the problem. Flexar UHPLC systems can deliver as much as 10-fold gain in productivity, while reducing mobile phase solvent consumption by more than 15-fold, depending on the application. Now greener operations are within your grasp.

## SPOTLIGHT ON BETTER MEASUREMENTS



### Brownlee SPP Superficially Porous Particle Technology

Generate "UHPLC-like" separations on a standard HPLC system. With Brownlee SPP columns, you can achieve sharper peaks and faster separation results without worrying about high backpressure or compromising column longevity. Unlike other columns, Brownlee SPP columns use 2.7  $\mu\text{m}$  particles comprised of a thin outer shell of high-quality porous silica fused to a solid inner core. This advanced design allows for a shorter diffusion path, keeps backpressure to a minimum and improves column your efficiency.

[www.perkinelmer.com/spp](http://www.perkinelmer.com/spp)



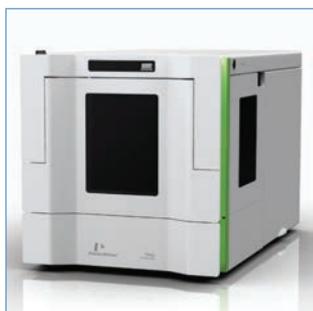
## FLEXAR LC



### For ease and reliability, there's only one choice.

Let's start with the basics – ergonomics, safety, reliability, ease, performance. You get it all with the Flexar LC. The elegant user interface is streamlined to improve throughput and optimize operator safety. And Flexar simplifies your process so you can focus on your application. It's the HPLC system you'll count on day after day.

- **Integrated LC tube management** for streamlined chromatography
- **Hidden plug-and-play drainage** automatically interconnects with components added to system
- **Convenient solvent manager** with integrated degasser and software communication link
- **Built on rugged and reliable PerkinElmer LC technology** for maximum uptime and low cost of ownership



Features easy-open access to the autosampler.



Unique hidden inter-component drainage system protects the user and system from leak errors.

### Reach for experience

Flexar is the latest innovation in PerkinElmer's long track record of performance in liquid chromatography. With over 30 years of experience in LC, we understand the challenges you face. Our solutions have been proven in thousands of labs worldwide.

## SPOTLIGHT ON BETTER MEASUREMENTS



Certified LC Clean™ Vial, Cap and Septa Kits (N9300707/N9300708/N9300719/N9300720)  
We have a variety of LC certified vials, caps and septa made from the finest materials to ensure you experience accurate and dependable measurements. Our vials are made from Type 1 Borosilicate glass, which conforms to all USP, JP and EP requirements. Each product is manufactured using strict quality control standards and are packed in a clean environment to ensure you receive contaminant free product every time.

# CHROMERA, THE POWERFULLY EASY CDS

Chromera combines powerful functionality with unmatched ease of use for a more streamlined data handling experience. It's the first CDS developed keeping specific UHPLC

in mind. Any task you wish to perform is only one or two clicks away. And every page is optimized to allow for maximum integration of information.



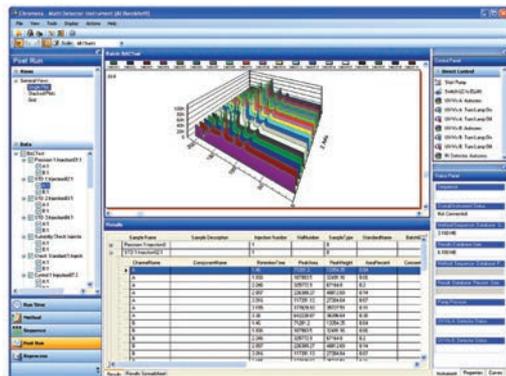
**CHROMERA CDS**  
Chromatography Data System

## Powerful Functionality

- Device description technology automatically changes the GUI to reflect the configuration you've selected
- Method editing can be done in real-time with immediate feedback on status
- Run time can be extended during analysis to facilitate your method development process

## Unmatched Ease of Use

- Modular design and intuitive "one-click" navigation make operation simple and data easy to locate
- Interface provides "hands-on" control of instruments – for immediate interaction with your chromatographic system



Choose from single plot, stacked plot, grid views or overlays to better assess results. 3D view of data makes for dynamic presentations.

## Helpful Wizards

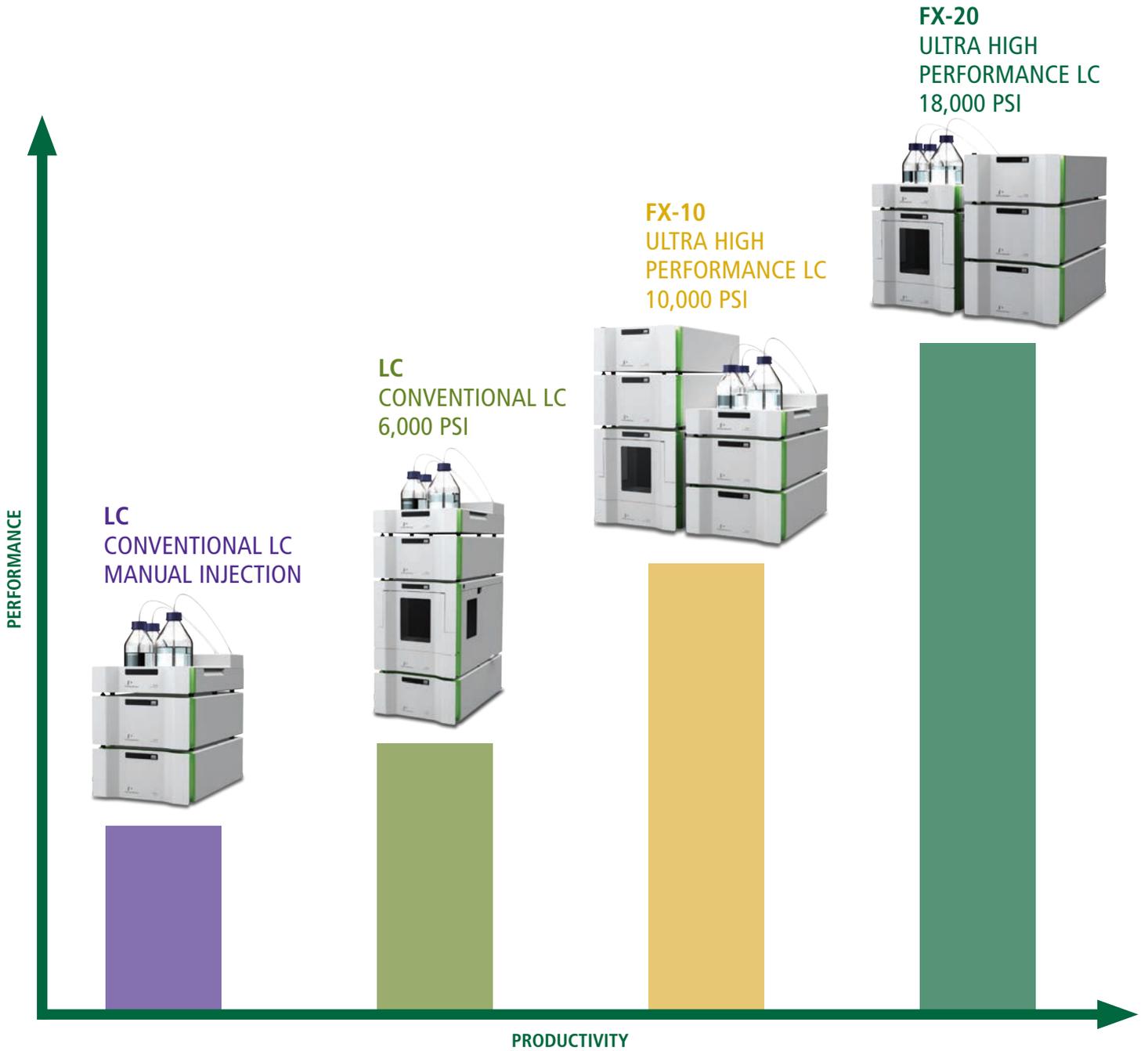
- Point-and-click identification automatically enters data when clicking on a point in your chromatograph
- Decision points automatically pause a sequence so you can check parameters and make any adjustments
- Reporting wizard provides a wide range of templates as well as the ability to customize your own reports

## TotalChrom – compliance and enterprise solutions

Even at the highest throughput levels, TotalChrom handles peak detection, integration and analysis with sophisticated algorithms, refined through years of experience in chromatographic data processing. Your method development is faster and easier with TotalChrom CDS.

- Scalable architecture
- Manages in stand-alone, thin-client or client/server environments
- 21 CFR Part 11 compliance features
- Serves as both instrument controller and data manager

# EXPANDABLE OPTIONS TO MEET YOUR NEEDS TODAY AND INTO THE FUTURE





Mix and match these stackable, modular components to meet your application needs.

Complete your ideal LC system with Flexar's full selection of consumables and kits. And be sure to ask about our flexible financing options.

## SOFTWARE SOLUTIONS

- Chromera and TotalChrom

## PUMPS

- Flexar Isocratic LC Pump
- Flexar Binary LC Pump
- Flexar Quaternary LC Pump
- Flexar FX-10 UHPLC Pump
- Flexar FX-20 UHPLC Pump

## DETECTORS

- Flexar UV/Vis LC Detector
- Flexar FX-UV/Vis UHPLC Detector
- Flexar PDA Plus Detector
- Flexar FX-PDA UHPLC Detector
- Flexar Refractive Index LC Detector
- Flexar Fluorescence LC Detector
- ELSD Detector

## AUTOSAMPLERS

- Flexar LC Manual Injection Valve
- Flexar LC Autosampler
- Flexar FX UHPLC Autosampler

## COLUMN OVENS

- Flexar LC Column Oven
- Flexar Peltier Column Oven
- Flexar Peltier LC Column Oven with Switching Valve
- Flexar Dual Column UHPLC Oven

## SOLVENT MANAGERS

- Flexar Solvent Manager
- Flexar Solvent Manager with 3-channel Vacuum Degassing
- Flexar Solvent Manager with 5-channel Vacuum Degassing

## Better Solutions for Demanding Applications

From extraction to detection, your sampling success is our main priority. We offer a series of Application Notes designed to provide you with all the information you need to stay relevant within today's ever changing environment. Application notes can be downloaded from your instrument web page.



# ALL THE COMPONENTS FOR SUCCESS

## PUMPS

### Pump up performance.

More samples done faster. Year after year. That's what you get when you combine high throughput power with the industry's most reliable, rugged family of pumps. We have the performance you want, whatever your analytical flow rate needs may be.

- **10x throughput improvement** with Flexar FX-10 and FX-20 UHPLC pumps
- **10-15x less solvent consumption** for minimal waste disposal, reduced operating costs and greener productivity



- **Proven reliability** minimizes cost of ownership
- **Isocratic to binary to quaternary upgrades** right in your lab

## DETECTORS



### See deeper into your sample.

From rugged reliability to outstanding spectral integrity, Flexar Detectors offer fast, sensitive performance for a wide range of applications. Get every detail about your samples and gain deeper insights in your results.

#### Flexar UV/Vis Detectors

- **Wide range of flow cells** from conventional 10 mm down to high-efficiency micro flow cell for optimum UHPLC peak resolution

- **Captures even the fastest UHPLC peaks** with 100 pts/sec detection on FX model
- **Dual-beam optical design** with choice of deuterium or tungsten source lamps

#### Flexar PDA Plus Detector

- **Excellent performance**, HPLC or UHPLC
- **Best wavelength accuracy** gives confidence in results
- **Modular flowcell design** for superior sensitivity
- **Highest data acquisition rates** (200 hz)

#### Fluorescence Detectors

- **Exceptional sensitivity** for the most demanding applications

#### Flexar Refractive Index

- **Highly stable, sensitive detection** for compounds without high UV absorbance
- **Reliable, unattended analysis** with remote autozero and autopurge of reference cell
- **Increased detector stability** with active temperature control of the flow cell

## AUTOSAMPLERS



FX AUTOSAMPLER

### Inject with greater precision.

Best-in-class cycle time. Wide injection volume range. Excellent injection reproducibility. Precisely what you need to increase your sample throughput and efficiency.

- Injects sample volumes as little as 1  $\mu\text{L}$  at pressures up to 18,000 psi with the FX UHPLC Autosampler
- Loads sample in only 8 seconds (in partial fill mode)
- Three injection modes: full loop, partial fill and  $\mu\text{L}$ -pickup with no sample waste
- Peltier cooling/heating mode option for operation at 4  $^{\circ}\text{C}$  to ambient 40  $^{\circ}\text{C}$ . Will reach with 4  $^{\circ}\text{C} \pm 2^{\circ}\text{C}$  achievable even at ambient temperatures up to 25  $^{\circ}\text{C}$

## COLUMN OVENS

### Get a higher degree of control.

Get precise temperature control for better column performance and more repeatable retention times. With its built-in leak alarm and choice of versions, the Flexar LC Column Oven is the safe, accurate, flexible choice.

- Three versions: conventional oven, Peltier (heat and cool) and Peltier with column selection/switching
- Temperature range of 30  $^{\circ}\text{C}$  to 90  $^{\circ}\text{C}$  (5  $^{\circ}\text{C}$  to 90  $^{\circ}\text{C}$  for Peltier), controlled to within 0.2  $^{\circ}\text{C}$  throughout the entire temperature range



LC COLUMN OVEN

- Large, easily accessible column compartment holds even 30 cm column format

## SOLVENT MANAGERS



SOLVENT MANAGER

### Keep your work flowing.

There's nothing stopping you now. Convenience and protection are built-in with the Flexar Solvent Manager.

- Plug-and-play drainage system automatically interconnects, even as you add components
- Removable tray contains breach of complete bottle
- Three versions: without degassing, 3-channel degassing and 5-channel degassing



# THE PERFECT PARTNERSHIP FROM START TO FINISH

## The World's Most Trusted Laboratory Services

Nothing has a greater impact on productivity or return on investment than instrument uptime. And no one does more to ensure your chromatography and mass spectrometry systems perform day in and day out than PerkinElmer. With PerkinElmer OneSource® Laboratory Services, you have the world's largest and most respected global service and support network at your disposal. We go beyond just maintenance and repair of instrumentation. We incorporate laboratory asset management as part of our customers' business equation—a partner with proven results in improving efficiencies, optimizing operations and providing cost certainty across the globe.

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 with more than 400,000 assets currently under care, 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.

## The Right Accessories, Consumables Methods and Application Support

Whether you are conducting routine raw materials validation or performing the most demanding applications analysis, your success is our top priority. Together, we can help improve your efficiency, control costs and optimize your analysis.

From the newest products in sample preparation and chromatography columns to standards, PerkinElmer has the consumables and accessories for applications in atomic spectroscopy, materials characterization, chromatography and mass spectrometry.

From start to finish, our comprehensive portfolio of solutions is designed to ensure you receive accurate, repeatable results – on time and every time – throughout the lifetime of your instrument.

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