

Eksigent Ekspert NanoLC™ 400

Unmatched flexibility for low flow LC-MS



The NanoLC™ 400 System

The ideal choice for any workflow

The NanoLC 400 series enables a full range of analytical workflows that drive the identification of novel biomarkers or the quantification of small molecules and biologics to advance precision medicine research.

This front-end system consistently delivers accurate retention times, reproducible injection down to 200 nL and covers a broad range of flow rates.

- **Autosampler**

Provides flexible and reproducible injection down to 200 nL with no waste

- **Flow rates**

User-interchangeable plug-and-play flow modules to switch between nanoflow (100 nL/min - 1 µL/min) and microflow (1 - 10, or 5 -50 µL/min)



- **Flow accuracy**

SCIEX patented microfluidic flow control technology, for consistent, accurate retention times without flow-splitting

- **Software**

Integrated and controlled with SCIEX Analyst® Software

The NanoLC 400 system provides a new level of flexibility with plug-and-play flow cartridges that enable easy switching from high-sensitivity nanoflow for discovery to high throughput microflow for validation.

Designed for **separation versatility**

With exchangeable flow modules that extend the flow rate from nano to microflow in minutes and a high precision autosampler, the NanoLC system provides both flexibility and high throughput.

Move from discovery experiments, done at nano flow conditions for the ultimate sensitivity, to targeted experiments at higher flow rates for more throughput and robustness on any mass spectrometer*.



Plug-and-play flow modules enable flow rate ranges of:

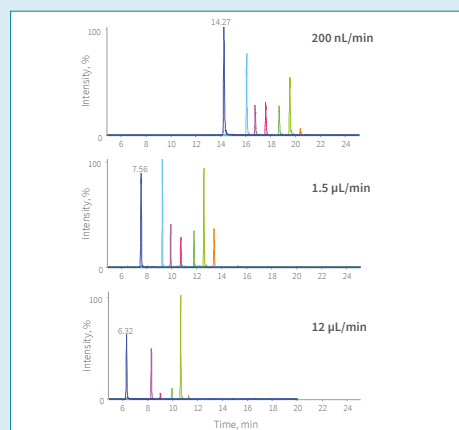
100 - 1000 nL/min

1 - 10 μ L/min

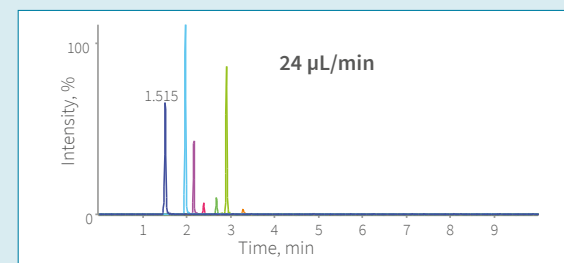
5 - 50 μ L/min

The NanoLC provides the highest levels of separation versatility. Here, a mixture of standard peptides is run at increasing flow rates ranging from a typical nanoflow separation (200 nL/min) to higher microflow (12 μ L/min) for accelerated throughput.

For targeted experiments, shorter columns and higher flow rates enable an even higher degree of throughput.



Significantly shorter run times and higher throughput can be achieved using micro flow rate flow modules. Tryptic peptide standards run at flow rates from 200 nL/min to 24 μ L/min using different flow modules.



The NanoLC can also be used with shorter columns for a further increase in flow rate and throughput.

*Software control is directly integrated into Analyst® Software and Xcalibur.

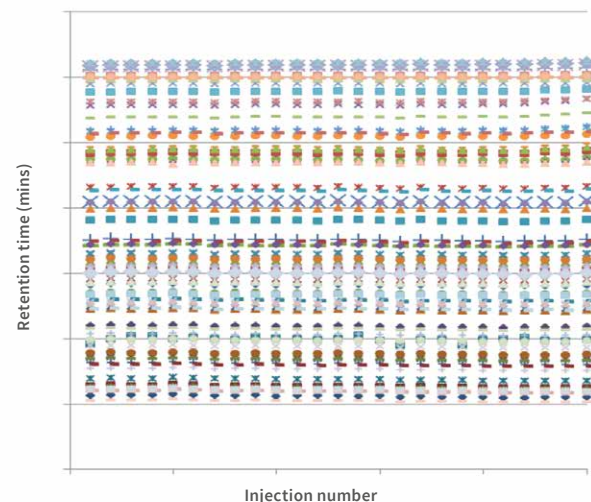
Superior reproducibility and reliability delivered

Providing high performance microfluidic flow control

Enables a wide flow range (100 nL/min to 50 μ L/min) via simple exchange of flow modules.
Improved flow rate precision for retention time reproducibility <0.35% RSD at 500 nL/min.

Ultra high performance liquid chromatography

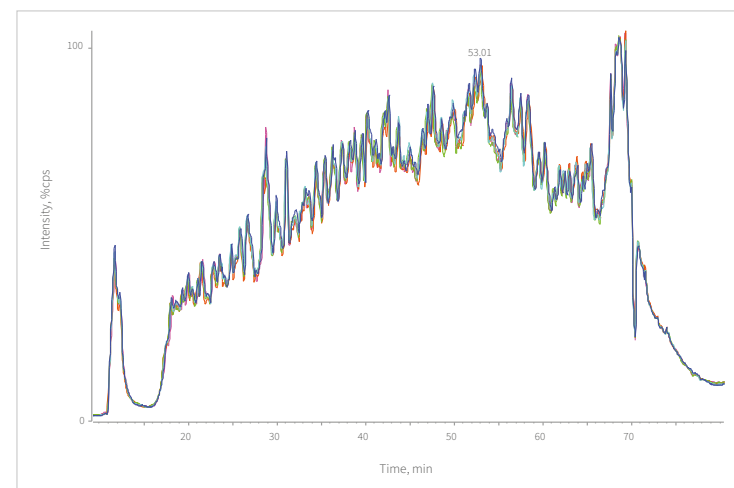
- No flow pulsations using a pneumatic amplifier
- Splitless nanoflow and microflow system
- Pressure up to 10,000 PSI



Reproducible retention times for 56 peptides monitored in an E.coli cell lysate across 25 replicate injections at 300 nL/min. Average RSD across all peptides was 0.21% RSD.

Superior reproducibility for quantitative proteomics

High retention time reproducibility is critical for comprehensive quantitative proteomics workflows such as MS/MS^{ALL} with SWATH[®] Acquisition on SCIEX TripleTOF system.



The Total Ion Chromatograms (TICs) of 10 replicate injections of depleted plasma analyzed by MS/MS^{ALL} with SWATH Acquisition overlay with excellent reproducibility for highest quantitative robustness.

Exceptional ion sources

Rugged, reliable, easily interchangeable ion sources are available for a wide range of applications and flow rates to suit your analysis needs. Rapid source change-over extends system flexibility with minimum downtime. All temperature, gas and electrical connections are fully integrated into the source housing—no extra lines to attach and no lost time. The system automatically detects and identifies the source without having to make hardware profile changes.

OptiFlow® Turbo V Ion Source—robustness and simplicity for high sensitivity microflow analyses

- Based on the trusted Turbo V source design, and with finger-tight fittings for tool-free setup

- New SteadySpray probes ensure consistent droplet formation for high quality spray



- Supports a wide flow rate range and intelligent probe recognition to eliminate all manual source adjustments

Micro: 1 - 10, 10 - 50,
50 - 200 $\mu\text{L}/\text{min}$

Nano: 100 - 1000 nL/min



- Integrated column heater with expanded range up to 90 Celsius for retention time consistency

Don't keep your workflows under lock and key

flexibility for the best performance

Gain maximum flexibility by using any microLC or nanoLC column, in any column chemistry, to help ensure the best possible performing assay for all your analyte types. SCIEX affiliate, Phenomenex, offers a large and diverse portfolio of low flow LC columns for a wide range of flow rates.

Select the right chemistry for your application

Peptide analysis and quant

- Luna Omega PS-C18
- bioZen PS-C18
- bioZen XB-C18
- Kinetex XB-C18
- Jupiter Proteo

Intact protein quant

- Jupiter C4
- Luna C8
- Jupiter C18

Metabolomics

- Kinetex Biphenyl

Oligonucleotides

- Luna NH2

Drug research panels

- Kinetex Biphenyl
- Kinetex Phenyl-Hexyl
- Luna Omega Polar C18

Small molecule quant

- Luna Omega C18
- Luna Omega Polar C18
- Synergi Fusion-RP (C18)
- bioZen Polar-C18
- Synergi Hydro-RP (C18)
- Kinetex EVO C18
- Gemini C18

Simplified installation with security link tubing

- No tools required
- Fitting self-adjusts at column inlet to help ensure zero dead volume
- Torque limiting technology prevents system and column port damage
- Pressure rated to 19,000 psi (1,310 bar) available in both 25 and 50 μm



For column ordering information visit:
[phenomenex.com](https://www.phenomenex.com)



Meeting the needs for **every workflow**

With single-gradient and dual-gradient models available—workflows from simple trap and elute to complex multi-dimensional separation are possible. Compatible with SCIEX Triple Quad™, QTRAP® and TripleTOF® systems, the NanoLC 400 series readily fits the ever-changing needs of your lab.



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

International Sales
For our office locations please call the division headquarters or refer to our website at sciex.com/offices

