NanoLC 400 system

Unmatched flexibility for low flow LC-MS

SCIEX
The Power of Precision

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-interchangable 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

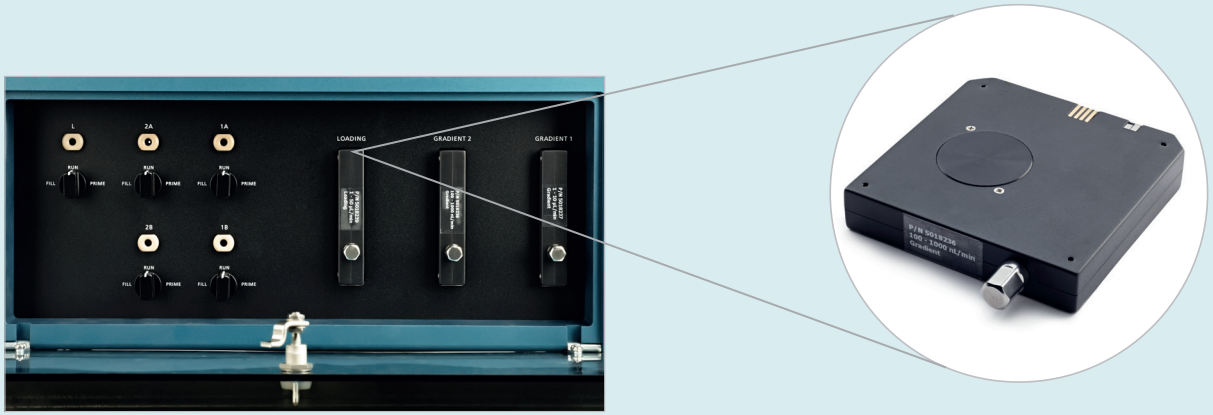
- **Software**
  Integrated and controlled with SCIEX Analyst software

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*.

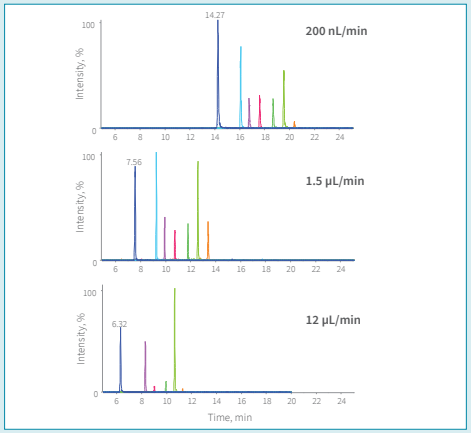


Plug-and-play flow modules enable flow rate ranges of:

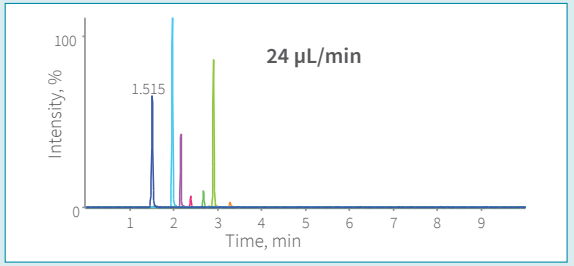
100 - 1000 nL/min
1 - 10 µL/min
5 - 50 µL /min

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 µL/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 µL/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.

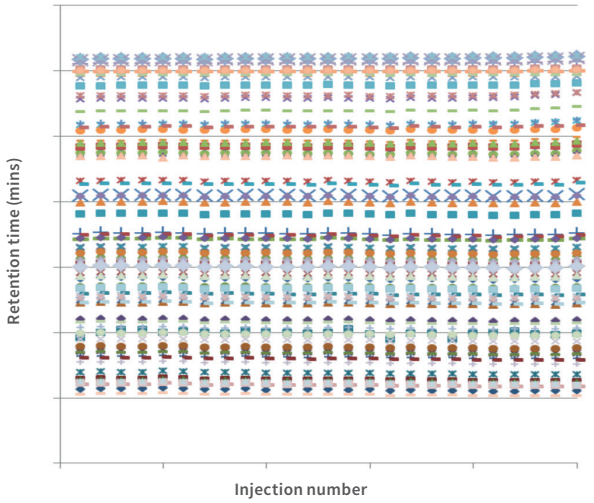
Superior reproducibility **and reliability delivered**

Providing high performance microfluidic flow control

Enables a wide flow range (100 nL/min to 50 µL/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

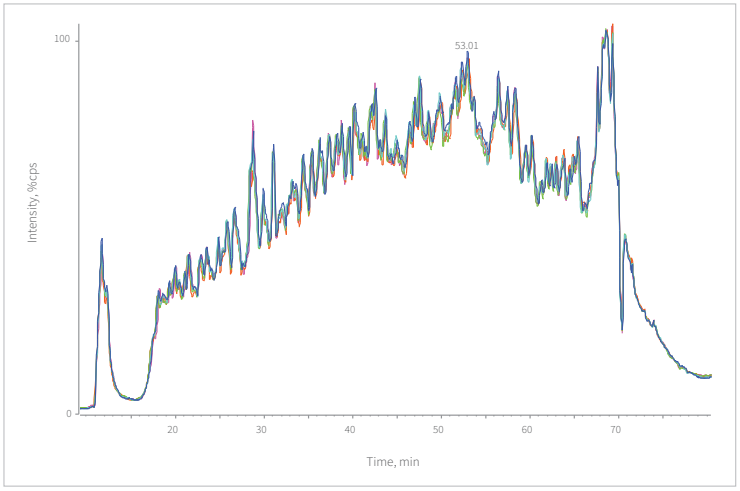
- No flow pulsations using a pneumatic amplifier
- Splitless nanoflow and microflow system
- Pressure up to 10,000 PSI



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

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

  Micro: 1 - 10, 10 - 50, 50 - 200 µL/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

phenomenex®
...breaking with tradition℠

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.

SCIEX Now support network

The destination for all your support needs

Data integrity

Increase your confidence with compliance services to help you safeguard your data, confirm data integrity and ensure system modifications can be traced.

Onboarding

You are automatically register to SCIEX Now Online, enrolled to your in your Learning Hub learning path, and setup for success.

Lab enhancement services

A holistic approach to your lab to increase productivity and decrease system downtime. We help you meet tight deadlines, improve the quality of results and ultimately increase your profits.

Learning Hub

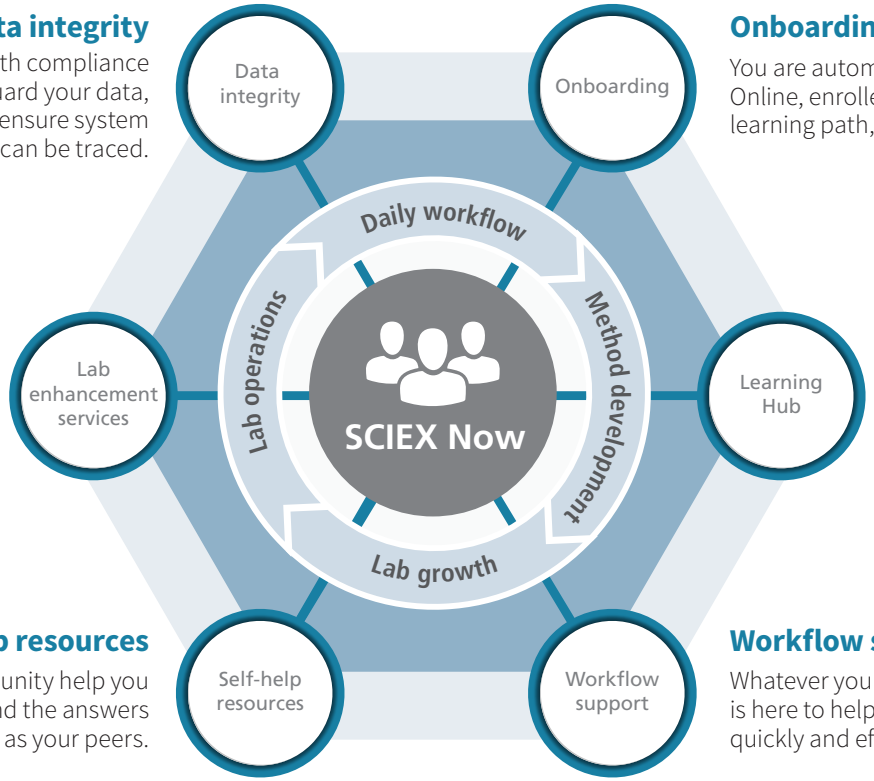
Best-in-class content, personalized learning paths—delivered using the latest memory science techniques.

Self-help resources

Our knowledge base and community help you move your science forward and find the answers you need from SCIEX experts as well as your peers.

Workflow support

Whatever your challenge, the SCIEX support team is here to help you achieve your scientific goals quickly and efficiently.



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