



Thermo Scientific
EASY-nLC 1200 System

Leading in simplicity
and performance

Peak performance made EASY

Effortless ultra high performance
for everybody

A straightforward LC-MS solution

- Optimized and integrated system for proteomics
- Highest pressure rating available, ideal for ultra long column applications
- Ease-of-use with intuitive system operation
- Excellent performance for every level of expertise

“The EASY-nLC 1200 is more robust than the EASY-nLC 1000, and the higher pressure capabilities enable us to load and re-equilibrate at higher flow rates increasing our overall throughput.”

Namrata Udeshi and Steve Carr, Broad Institute of MIT and Harvard

All-In-One design

- Pumps, autosampler and control PC in one compact housing
- Powerful performance with a small footprint

Intuitive software at your fingertips

- Touch screen for direct system control
- Wizard style method set-up

Intelligent maintenance

- Automated built-in diagnostic routines
- Fast and easy troubleshooting

Full compatibility with all Thermo Scientific mass spectrometers

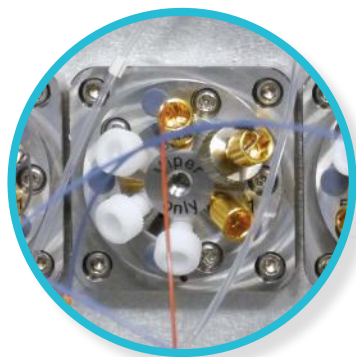
- Easy connection with dedicated sources
- Control software fully integrated into Thermo Scientific™ Xcalibur™



Thermo Scientific™ nanoViper™ fingertight fittings

Full nanoViper flow path

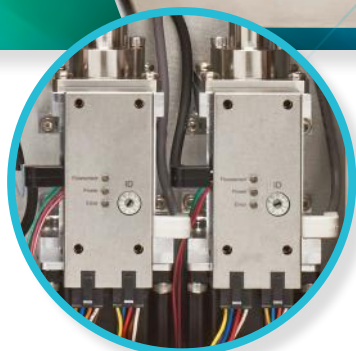
- Fast and reproducible nano connections
- Easy, tool-free handling



Switching valves

New maintenance-free valves

- Improved system reliability
- Lower cost of ownership



Nano LC pumps

New 1200 bar pumps

- Increase your analytical depth with longer columns
- Higher throughput via faster loading and column equilibration

Fast and simple instrument method set-up

- Five-step wizard guides you through your method creation
- Fully incorporated into Xcalibur for optimal use with Thermo Scientific™ mass spectrometers

New software features

Improved system robustness and easier maintenance

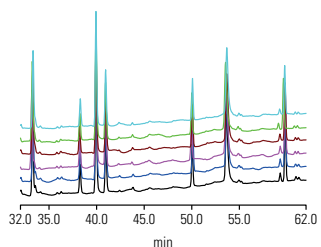
- Air check before each injection prevents loss of sample
- Simple procedure for column conditioning
- Improved diagnostics for easier troubleshooting



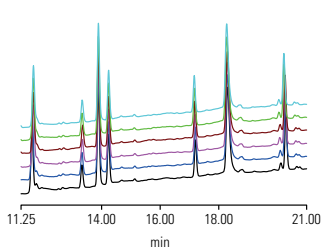
High precision and reproducibility with the EASY-nLC 1200

Consistent performance across a wide range of nano-flow rates

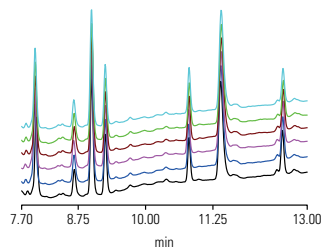
100 nL/min
90 min gradient



300 nL/min
30 min gradient

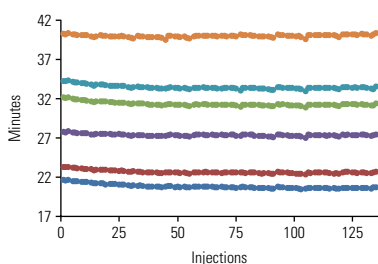


500 nL/min
18 min gradient



The retention time precision for all three flow rates is better than 0.4% RSD.

Excellent system stability at maximum pressure



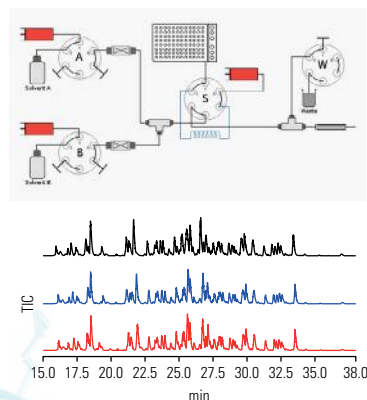
The retention time precision is better than 1% RSD for 135 consecutive injections (run continuously over eight days).

Conditions:

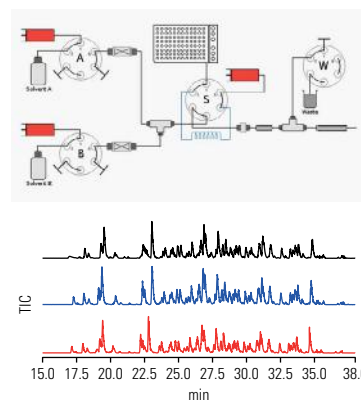
- 75 cm Thermo Scientific™ Acclaim™ PepMap™ column
- 300 nL/min gradient flow rate
- 60 min gradient
- 1180 bar sample loading and column equilibration
- 900 bar gradient maximum pressure

Consistent results with different set-ups

1-column (direct) set-up



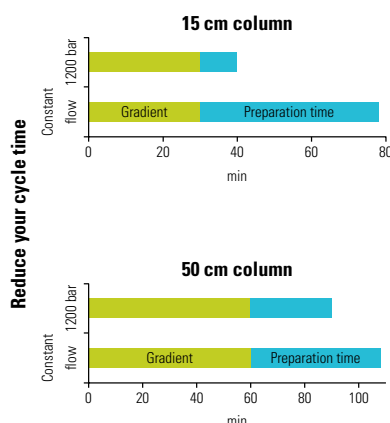
2-column (pre-concentration) set-up



Choose the best system set-up for your sample type and scientific question. Sample analysis in both set-ups will provide consistent and comparable results.

High throughput in deep proteomics

Improve your throughput by exploiting 1200 bar pressure

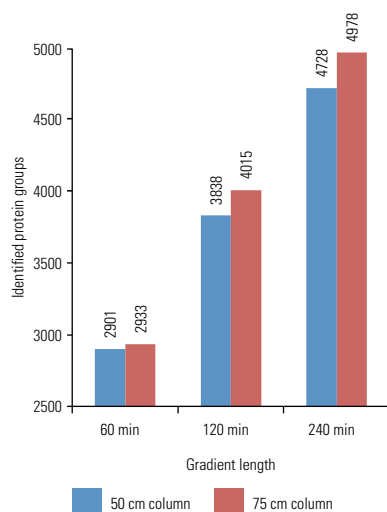


	15 cm column		50 cm column	
Loading mode	Constant flow (300 nL/min)	Constant pressure during preparation (1200 bar)	Constant flow (300 nL/min)	Constant pressure during preparation (1200 bar)
Gradient length	30 min	30 min	60 min	60 min
Column equilibration, sample pick-up, and loading	48 min	10 min	48 min	30 min
Cycle time	78 min	40 min	108 min	90 min
Injections per day	18.5	36	13.3	16
Additional throughput increase (%)	–	49%	–	17%

“The ability to run at higher pressure enabled us to more rapidly load samples, hence dramatically improving sample throughput.”

Thomas Kislinger, Princess Margaret Cancer Centre, University of Toronto

Identify more proteins using the new Acclaim PepMap 75 cm analytical column



Using longer columns will improve your protein coverage especially in combination with longer gradients.

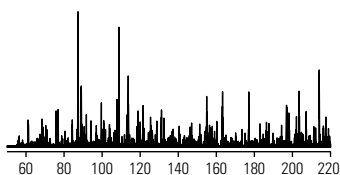
Conditions:

- 200 ng HELA digest
- Five injections per condition
- 75 cm and 50 cm Acclaim PepMap columns
- 300 nL/min gradient flow rate
- 1180 bar sample loading and column equilibration
- 900 bar maximum gradient pressure

Acclaim PepMap columns, raising the bar in proteomics

Now available in 75 cm length for even higher separation and resolving power

Exploit the enhanced pressure capability of the EASY-nLC 1200 with a column family that achieves higher peak capacities and improved protein identification



LC-MS of 200 ng HELA digest using a 75 cm Acclaim PepMap column (240 min run time)



The Acclaim PepMap family 1200 bar columns

75 μm i.d. in 15, 25, 50 and 75 cm length
50 μm i.d. in 15, 25 and 50 cm length

- Providing more identifications by nano LC-MS
- Highest sensitivity in TFA free nano LC-MS
- Highest resolution through higher peak capacity

The Acclaim PepMap family columns use fingertight nanoViper 1200 bar fittings for highest nano LC-MS performance

- Virtually zero-dead-volume connections
- Easy-to-use PEEK™ sheathed fused silica
- Fingertight to 1200 bar

The Acclaim PepMap EASY-Spray columns

“Plug-and-spray” simplicity for ease of use.

- Routine nano LC-MS performance
- Simple to use format
- Excellent performance for peptide separations
- Integrated heating for maximum repeatability



The Thermo Scientific nano LC portfolio: The right choice for every lab



EASY-nLC 1200
Operational simplicity
and excellent performance



UltiMate 3000 RSLCnano
Versatility and unsurpassed
precision

Performance	Splitless nano flow	✓	
	System pressure	○ ○ ○	○ ○ ○
	Retention time precision	○ ○ ○	○ ○ ○
	Nano flow range	○ ○ ○	○ ○ ○ ¹
System features	Space saving	○ ○ ○	○ ○ ○
	Design	Integrated	Modular
	Column compartment	n.a. ²	✓
	Sample capacity	○ ○ ○	○ ○ ○
	Zero-loss sample pick-up	✓	✓
	Nano flow pump	High pressure binary syringe pump	High pressure binary continuous flow pump
	Micro flow pump	n.a.	Low pressure ternary gradient pump
Application range	Direct injection	✓	✓
	Pre-concentration	Vented column setup	Continuous direct flow by integrated micro-flow pump
	2D salt steps	—	✓
	Offline fractionation	—	✓ ³
	Tandem nano LC	—	✓ ³
Software features	Integrated PC	✓	—
	Audit trail	—	✓

¹ Easily expandable to capillary and micro flow rates. More information available on thermofisher.com/nanoLCMS

² Not applicable, built-in heating for EASY-Spray column.

³ May require an additional nano pump and corresponding application kit.

Full compatibility with state-of-the-art mass spectrometers

Thermo Scientific nano LC systems offer market leading performance and interface seamlessly with all Thermo Scientific nano ESI sources and MS families.



EASY-nLC 1200

Operational simplicity and excellent performance



Thermo Scientific™ Dionex™ UltiMate™ 3000 RSLCnano

Versatility and unsurpassed precision



Thermo Scientific™ EASY-Spray™ source



Thermo Scientific™ Q Exactive™ HF hybrid quadrupole-Orbitrap mass spectrometer



Thermo Scientific™ EASY-Spray™ column

Thermo Scientific™ Orbitrap Fusion™ Lumos™ Tribrid™ mass spectrometer



Thermo Scientific™ Nanospray Flex™ ion source



Thermo Scientific™ TSQ Quantiva™ triple quadrupole mass spectrometer



For more information, visit: thermofisher.com/nanoLCMS or planetorbitrap.com

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