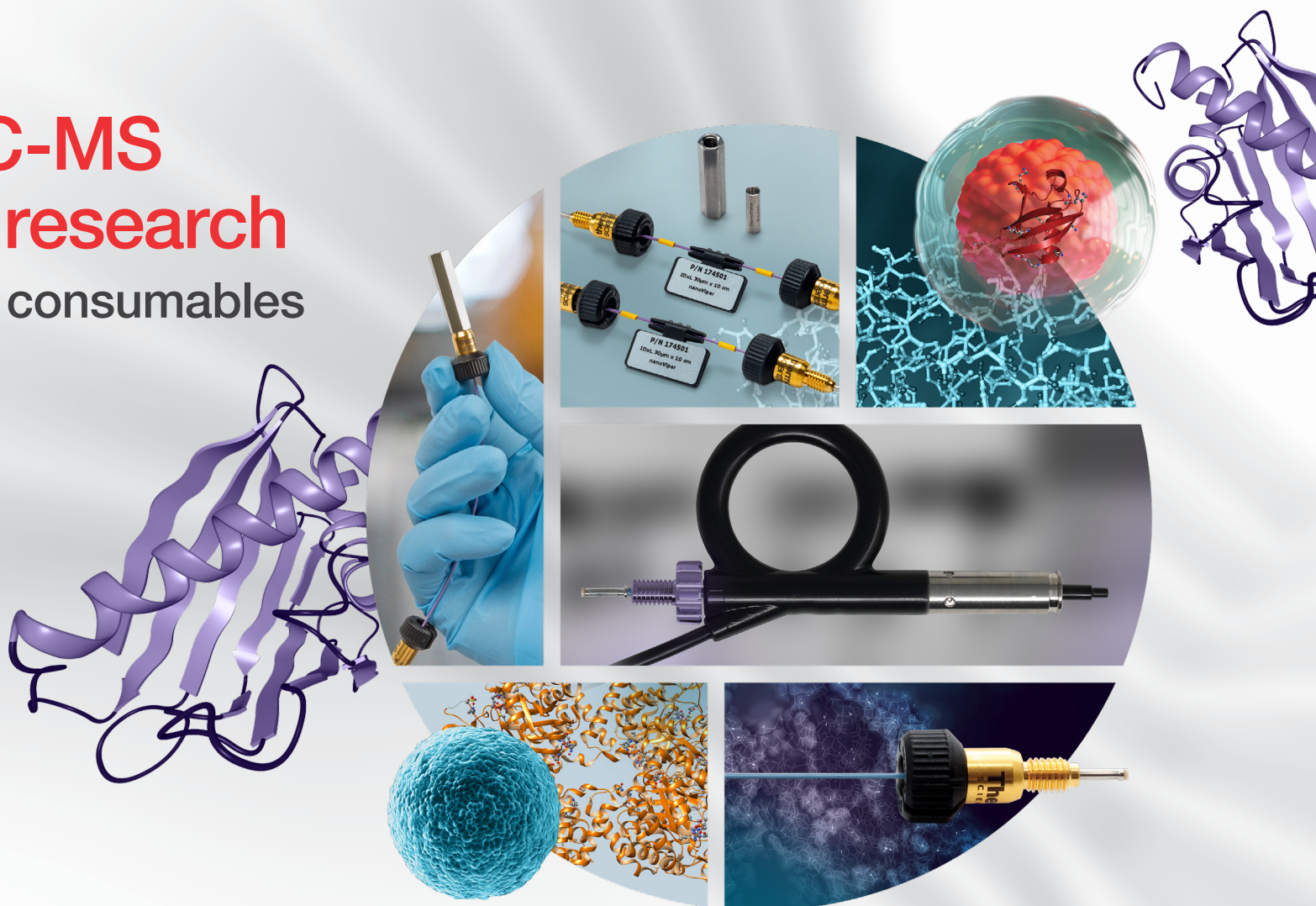


HPLC columns

Low-flow LC-MS proteomics research

Chromatography consumables reference guide



Overview

When pursuing the next scientific breakthrough in proteomics research, the details are important, from precise column connections to the LC system. Thermo Fisher Scientific™ offers the consumables you need to make your next discovery—perhaps a new biomarker for a disease or predicting the outcome of patient treatments.



Learn about the portfolio of Thermo Scientific™ consumables and the value they can bring to your lab

Accelerating proteomics research with the Thermo Scientific™ Vanquish™ Neo UHPLC System

[View video](#)

Overview

Hear from industry experts

See data for yourself

Sample preparation

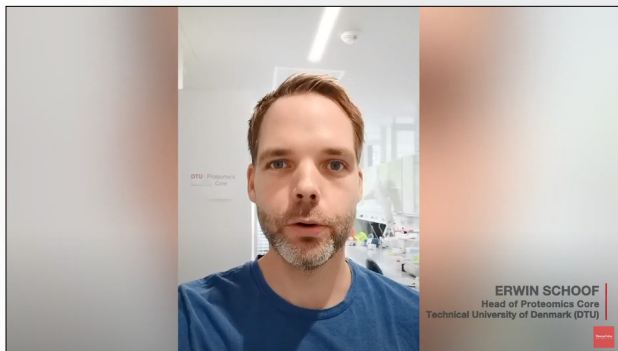
Vials, caps, and plates

Column formats

Column chemistries

LC system

Hear from industry experts



Learn how the Technical University of Denmark (DTU) is using the EASY-Spray nano-flow emitter

Erwin Schoof, Head of Proteomics Core, speaks about how the Thermo Scientific™ EASY-Spray™ nano Emitter has proven beneficial in their high throughput chromatography.

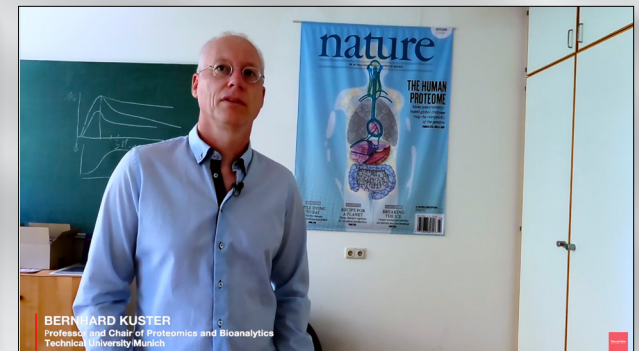
[View video](#)



Learn how the Biognosys AG is using the EASY-Spray capillary- and nano-flow emitters

Roland Bruderer, Principal Scientist, R&D, explains how the EASY-Spray capillary- and nano-flow emitters are key elements in robust set-up for large scale proteomics endeavors.

[View video](#)



Learn how the Vanquish Neo UHPLC system accelerated new discoveries and productivity

Vanquish Neo UHPLC system: Transforming proteomics

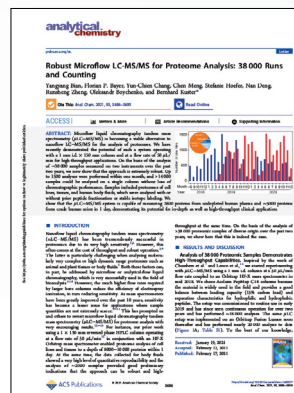
[View video](#)



Vanquish Neo UHPLC system: Going beyond of what was possible before

See how your research in the field of proteomics will benefit from the Vanquish Neo UHPLC system.

[View video](#)



Journal—Robust microflow LC-MS/MS for proteome analysis: 38,000 runs and counting

Robust microflow LC-MS/MS for proteome analysis: 38,000 runs and counting

[View journal article](#)



Vanquish Neo UHPLC system: Listen to a long-term customer experience

David H. Perlman from the Merck Exploratory Sciences Center evaluates the Vanquish Neo UHPLC system after extensive testing.

[View video](#)

Overview

Hear from industry experts

See data for yourself

Sample preparation

Vials, caps, and plates

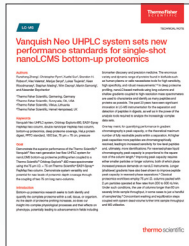
Column formats

Column chemistries

LC system

See the data for yourself

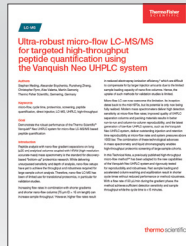
Bottom-up proteomics research



Vanquish Neo UHPLC system sets new performance standards for single-shot nanoLCMS bottom-up proteomics (TN74152)

Demonstrates the superior performance of Vanquish Neo UHPLC system for nanoLCMS bottom-up proteome profiling when coupled to Thermo Scientific™ Orbitrap Exploris™ 480 Mass Spectrometer using the 75 µm I.D. × 75 cm Thermo Scientific™ EASY-Spray™ PepMap™ Neo Column. Demonstrates system versatility and potential for new levels of proteomic depth coverage through the coupling of two 75 cm long nano-capillary columns.

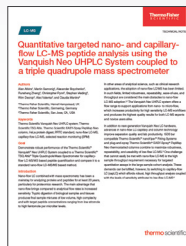
View full note



Ultra-robust micro-flow LC-MS/MS for targeted high-throughput peptide quantification using the Vanquish Neo UHPLC system (TN74161)

Demonstrates the robust performance of the Vanquish Neo UHPLC system for micro-flow LC-MS/MS based peptide quantification.

View full note



Quantitative targeted nano- and capillary-flow LC-MS peptide analysis using the Vanquish Neo UHPLC system coupled to a triple quadrupole mass spectrometer (TN000137)

Demonstrates the robust performance of the Vanquish Neo UHPLC system coupled to Thermo Scientific™ TSQ Altis™ Triple Quadrupole Mass Spectrometer for capillary-flow LC-MS/MS based peptide quantification and compares it to a standard nano-flow LC-MS/MS based method.

View full note



Robust long-term Vanquish Neo UHPLC system operation enabling high-performance high-pressure nanoLC separations (TN000172)

Demonstrates the long-term robustness and consistent chromatographic performance of the Vanquish Neo UHPLC system under nanoLC conditions for bottom-up proteome profiling using a 75 µm I.D. × 50 cm EASY-Spray PepMap Neo column.

View full note



Fast, sensitive, and reproducible nano- and capillary-flow LC-MS methods for high-throughput proteome profiling using the Vanquish Neo UHPLC system hyphenated with the Orbitrap Exploris 480 MS (TN000138)

Demonstrates the performance of the Vanquish Neo UHPLC system, the next-generation nano-, capillary-, and micro-flow LC, coupled to the Orbitrap Exploris 480 MS for high-throughput bottom-up proteome profiling using a 75 µm I.D. × 15 cm EASY-Spray PepMap Neo column.

View full note



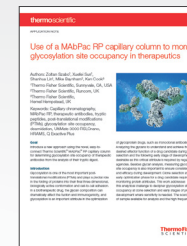
Top-down proteomics research



High sensitivity capillary LC-MS analyses of low amounts of therapeutic antibodies and their subunits (AN22065)

Demonstrates the column performance through high-resolution intact protein separation and overview of intact protein workflows.

View full note



Use of a MABPac RP capillary column to monitor glycosylation site occupancy in therapeutics (AN22066)

A new approach using the novel, easy-to-connect Thermo Scientific™ MABPac™ RP Capillary Column for determining glycosylation site occupancy of therapeutic antibodies from the analysis of their tryptic digest.

View full note



Overview

Hear from industry experts

See data for yourself

Sample preparation

Vials, caps, and plates

Column formats

Column chemistries

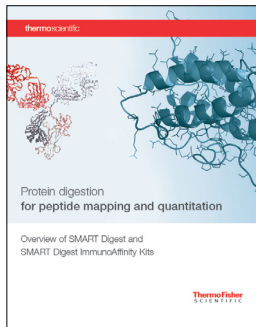
LC system

Sample preparation for bottom-up proteomics

Thermo Scientific™ SMART Digest™ Pepsin Kits improve workflows by quickly and efficiently digesting proteins for characterization and quantitation applications. This is achieved with heat-stable immobilized trypsin design.



Thermo Scientific™ SMART Digest™ Trypsin Kit



Fast sample preparation

Protein digestion for peptide mapping and quantitation—overview of SMART Digest and SMART Digest ImmunoAffinity Kits

Digest your sample in as little as 5 minutes. Automating the process is simple. Learn how SMART Digest ImmunoAffinity (IA) Kits could help with your analysis.

[View full brochure](#)



Increased sensitivity

Robust and reproducible peptide mapping and intact mass analysis workflows on a single instrument platform

Learn about the applicability of a single Thermo Scientific™ LC-MS platform for extensive characterization of biotherapeutic proteins, by peptide mapping and intact protein analysis on the recombinant protein somatotropin.

[View full note](#)



Thermo Scientific™ KingFisher™ System

Highly reproducible



Automating the Thermo Scientific SMART Digest Trypsin Kit with Thermo Scientific KingFisher System

Save time and get better results with the SMART Digest Trypsin Kit and automate your digestion with a KingFisher System with a touch of a button.

[View video](#)

Recommended autosampler vials, caps, well plates, and mats for low-flow chromatography

When your instrument, sample handling, and methodology push the limits, your chromatography autosampler vials and seals can't be the broken links in the chain. Ensuring quality in every part of your workflow, including autosampler vials and closures, is critical to success. See the difference with Thermo Scientific certified autosampler vials and closures.

Vial and caps kit	
6PK1655	0.2 mL amber TPX screw 9 mm short thread conical glass insert, cap 9 mm black PP white silicone
Vials and vial caps	
60180-1655	Amber TPX vial with fused insert
6PSC9STB1	9 mm screw thread black cap, bonded septum
6PSV9-TR1	1.5 mL clear screw 9 mm short thread total recovery
6PSV9-2PSS	2 mL amber vial
6PSV9-03FIVP	Clear vial with fused insert
6PSV9-03FIVAP	Amber vial with fused insert
6PSC9STS1	9 mm screw thread grey cap, pre-slit bonded septum
96-well plates	
60180-P201B	Certified 96-well plate, 7 mm deep well, U-shape bottom base, 1.0 mL, PP, barcoded
60180-M146	Plate seal tape, part adhesive PET/SIL/PET



Choosing the column format

Thermo Scientific™ EASY-Spray™ PepMap™ Neo Column

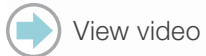


- Plug-and-spray connection
- Integrated heating
- Low dispersion
- PepMap Neo columns are 1500 bar compatible



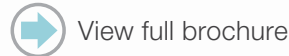
Thermo Scientific™ EASY-Spray™ 150 mm LC columns

Robust nano- and capillary-flow LC-MS with EASY-Spray LC columns

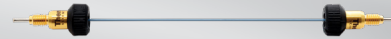


EASY-Spray technology

Plug-and-spray with state-of-the-art performance



Thermo Scientific™ Double nanoViper™ (DNV) Column



- Allows you to use replaceable emitters when thermostating is not critical
- Non-Thermo Scientific UHPLC-MS solution
- PepMap Neo columns are 1500 bar compatible



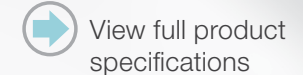
Discover a better LC connection

Watch how quickly the Thermo Scientific™ Viper™ and nanoViper™ Fingertight Fittings can be installed without the need for any tools - YouTube



Viper and nanoViper Fingertight Fitting Systems

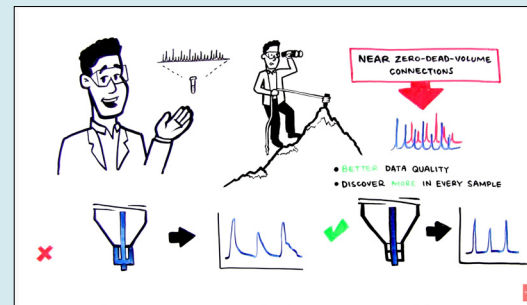
Tool-free LC connections for HPLC, UHPLC and low-flow UHPLC systems



General information

Learn about low-flow HPLC column connections

Nano-flow liquid chromatography is ideal for proteomics research that requires detailed sample information from small sample volumes.



Overview

Hear from industry experts

See data for yourself

Sample preparation

Vials, caps, and plates

Column formats

Column chemistries

LC system

Choosing the column chemistry for your separation

Low-flow chromatography is ideal when detailed sample information is required from small sample volumes, especially for bottom-up and top-down proteomics research. Compared with analytical flow LC-MS (>100 $\mu\text{L}/\text{min}$), the signal with low-flow (<100 $\mu\text{L}/\text{min}$) can be many times higher. Low-flow columns—also known as nano, capillary, and micro columns—have a smaller diameter compared to analytical columns.

Bottom-up proteomics research

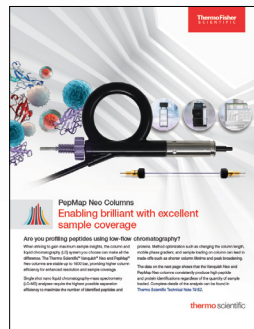
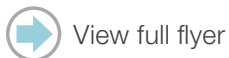
PepMap Neo UHPLC columns

- PepMap Neo UHPLC columns are a recent addition to the family. PepMap Neo columns are packed to higher pressure, providing 1500 bar pressure rating, improved column-to-column consistency, and increased efficiency.
- Column formats: EASY-Spray and double nanoViper



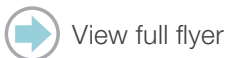
PepMap Neo Columns

Enabling brilliant performance



PepMap Neo Columns

Enabling brilliant with excellent sample coverage



Top-down proteomics research

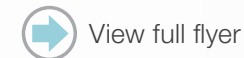
MABPac RP capillary HPLC column

- The MABPac RP capillary column is best-suited for the characterization of intact proteins in top-down proteomics applications where sample amount is critically limited.
- Column formats: EASY-Spray and double nanoViper



Right-sized for highest sensitivity

The shortest distance between data and discovery



Overview

Hear from industry experts

See data for yourself

Sample preparation

Vials, caps, and plates

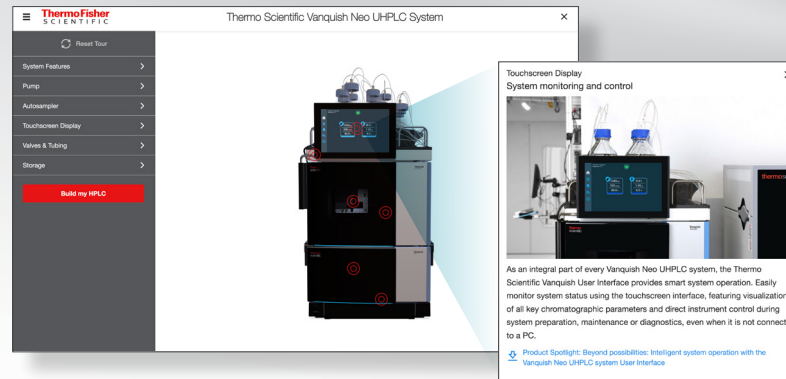
Column formats

Column chemistries

LC system

The new standard in nano-, capillary-, and micro-flow LC

The Vanquish Neo UHPLC system



All-in-one system

Experience the 3D virtual product tour to navigate your way around the Vanquish Neo UHPLC system

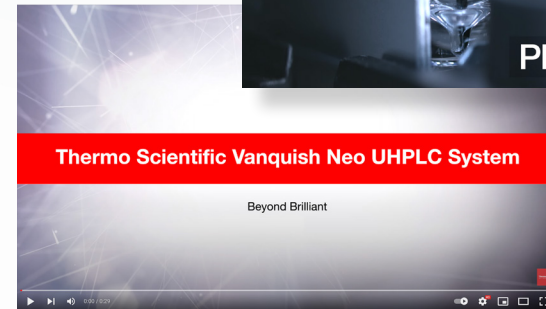
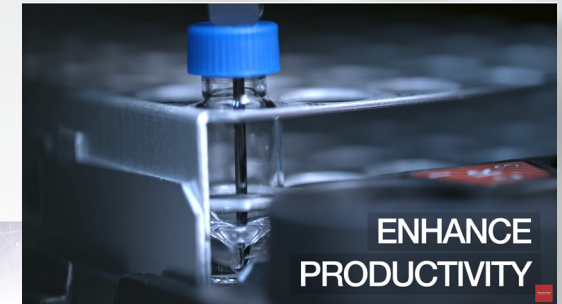
[Take the virtual tour](#)



Learn about our all-in-one low-flow system for high sensitivity LC-MS workflows

Vanquish Neo UHPLC system—beyond brilliant

[View full brochure](#)



Discover why the Vanquish Neo UHPLC system is the new standard in low-flow LC

Get a first impression of the new standard in low-flow UHPLC - YouTube

[View video](#)

Overview

Hear from industry experts

See data for yourself

Sample preparation

Vials, caps, and plates

Column formats

Column chemistries

LC system



ThermoFisher
SCIENTIFIC

Learn more at thermofisher.com/lowflowHPLCcolumns

For Research Use Only. Not for use in diagnostic procedures. © 2022 Thermo Fisher Scientific Inc. All rights reserved.
All trademarks are the property of Thermo Fisher Scientific and its subsidiaries unless otherwise specified. **XX000261-EN 0122M**

thermo scientific