

HPLC columns

Thermo Scientific μ PAC Neo Plus HPLC Columns

Benefits

- Excellent sensitivity and sample coverage
- Column-to-column reproducibility
- Robust performance

Keywords

μ PAC Neo Plus HPLC columns, micro pillar array, bottom-up proteomic analysis, retention time stability

 μ PAC separations—better by design

Thermo Scientific™ μ PAC™ (micro Pillar Array Column) technology is unique—it is built by precise micromachining chromatographic separation beds from silicon. This approach brings four critical and unique characteristics:

- **Perfect order**—Thermo Scientific™ μ PAC™ Neo Plus HPLC Columns are designed with a perfect order, eliminating heterogeneous flow paths. The ordered flow path of the μ PAC Neo Plus columns minimizes the dispersion to the overall separation resulting in sharper and more intense chromatographic peaks.
- **Reproducibility**—The unique micromachining manufacturing results in columns which are virtually identical. The increased injection-to-injection and column-to-column reproducibility provides increased confidence in results throughout the duration of a research study.
- **Performance and robustness**— μ PAC Neo Plus columns operate at moderate pressure allowing longer flow paths for increased separation performance and high sensitivity. Operating at lower back pressures also allows for longer column lifetime.
- **High throughput**—Dedicated μ PAC columns for high-throughput, comprehensive, and high-sensitivity, proteomics analyses.

μPAC Plus Neo columns

Sample coverage

μPAC Neo Plus columns provide comprehensive coverage with enhanced separating power compared to previous generation μPAC columns.

Column-to-column reproducibility

Each column is manufactured using the same lithographic mask, making every column identical and providing consistent chromatographic performance from column-to-column.

High flow rate flexibility

μPAC Neo Plus columns can be operated at moderate LC pump pressures up to 450 bar over a wide range of flow rates from deep-dive nano-flow to high-throughput capillary-flow applications.

Specifications

Description	Column specification		
Column type	Micro pillar array		
Packing material	Silicon chip		
Stationary phase	Reversed-phase C18		
Endcapped	Yes		
Maximum pressure	450 bar		
pH	1.5–7.0		
Porosity	59%		
Maximum temperature	60 °C		
	50 cm μPAC Neo Plus column	110 cm μPAC Neo Plus column	μPAC Neo Plus High Throughput column
Pillar length	16 μm	30 μm	25 μm
Pillar diameter	2.5 μm	2.5 μm	3 μm × 75 μm
Interpillar distance	1.25 μm	1.25 μm	2.00 μm
Bed width	180 μm	180 μm	1,850 μm
Bed length	50 cm	110 cm	5.5 cm
Volume	1.5 μm	4.5 μm	1.5 μm
Pore size	100–300 Å	100–300 Å	100–300 Å
Flow rate range	0.1–0.75 μL/min	0.1–1.0 μL/min	0.3–3.0 μL/min
Optimal gradient length	15–60 min	90–150 min	<15 min
Sample load	≤500 ng	500–2000 ng	10–500 ng

 Learn more at thermofisher.com/lowflowhplccolumns