

HPLC columns

μ PAC Neo HPLC columns

Use and care instructions

Product:**Thermo Scientific™ μ PAC™ Neo Low-load Trapping Column****Pressure limit**

Do not exceed the maximum trapping column pressure of 400 bar (5,800 psi). Exceeding this value will cause irreversible damage to the trapping column.

Installing the trapping column

The μ PAC Neo low-load trapping column is perfectly bi-directional, with integrated Thermo Scientific™ nanoViper™ Fingertight Fittings on both connection tubings. It can be used in either direction without the risk of damaging the separation bed.

Recommended configuration

The μ PAC Neo low-load trapping column is a C8 chemistry trapping column and designed to work in combination with the Thermo Scientific™ μ PAC™ Neo Low-load Column, for analysis of samples ≤ 10 ng of digested protein. The trapping column can be used in both forward flush and backflush mode, depending on the user's preference and the nanoLC system's capabilities.

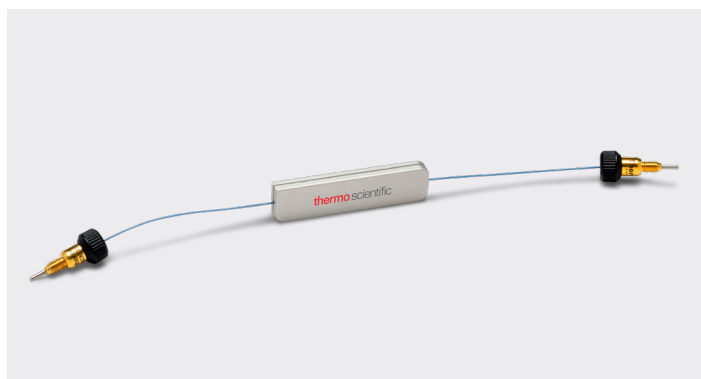
Backflush trapping

The μ PAC Neo low-load trapping column is connected directly to the UHPLC switching valve, either to the autosampler valve in the Thermo Scientific™ Vanquish™ Neo Autosampler or to the column oven valve.

Vented-tee

The μ PAC Neo low-load trapping column is configured in-line with the μ PAC Neo low-load column via an internal reducing connector T-piece.

On the Thermo Scientific™ Vanquish™ Neo UHPLC System, we would recommend the backflush configuration.

**Trapping column operation****Internal volume**

The μ PAC Neo low-load trapping column has an internal volume of 900 nL.

Column pressure

Maximum operating pressure is 400 bar (5,800 psi).

Flow rate

The μ PAC Neo low-load trapping column can be operated at flow rates between 1.0 to 60 μ L/min. At 10 μ L/min, using a water-acetonitrile mobile phase solvent system, the back pressure over the μ PAC Neo low-load trapping column ranges from 15 to 30 bar.

Column temperature

Maximum operating temperature is 60 °C (140 °F).

pH range

2.0 < pH < 7.0.

Trapping column operation (continued)

Preparation for use

- The μ PAC Neo low-load trapping column is shipped with 70% acetonitrile
- Before use, flush the trapping column with 100% acetonitrile or methanol, followed by at least 5 μ L of the desired loading solvent

Sample solvent

To maximize trapping efficiency, we recommend to dissolve samples in 0.1% TFA containing a low percentage of organic modifier (e.g. 1% acetonitrile). For backflush trap-elute configurations, a loading buffer comprised of 1% acetonitrile, 0.1% TFA is strongly advised.

Sample capacity

For the analysis of tryptic digested proteins, the equivalent of 10 ng of total protein can be injected without overloading the μ PAC Neo low-load trapping column:

- Use only fresh, degassed and LC-MS grade mobile phases that are compatible with reversed-phased liquid chromatography (RP-LC)
- Switch only between mutually miscible mobile phases
- Cleanliness of the sample greatly affects column and trapping column life
- Use (clean) sample which are free from particulates. Filter if necessary, using a 0.5 μ m cut-off filter.

Typical solvents

Acetonitrile (ACN), methanol (MeOH), isopropanol (IPA), trifluoroacetic acid (TFA), formic acid (FA)

Column care

- To prevent damage, handle μ PAC Neo low-load trapping columns, capillaries and accessories with care
- Never remove the nanoViper PEEK tubing extending from the aluminium jacket, nor cut the PEEK tubing. Do not open the housing of the column. This will damage the trapping column and prevent further use.
- Avoid storage of the μ PAC neo trapping column in TFA containing mobile phase

Disclaimer and contact

Warranty of the column extends up to 30 days after the purchase of the product.

Table 1. Properties overview

Column	Stationary phase	Max. column pressure	Max. temp (°C)	pH stability	Column volume (μ L)	Loadability (μ g protein)	Flow rate (μ L/min)
μ PAC Neo low-load trapping column	C8	400 bar	60	2-7	900	<0.01	0.1-60

Learn more at thermofisher.com/lowflowHPLCcolumns or contact us

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