Product Information

January 2025

MultoHigh-U

UHPLC, U-HPLC, UPLC, X-LC, RRLC, UFLC, Fast LC,…
All these terms describe fast HPLC.
Requirements for maximal speed of an analysis are an HPLC system enabling large flows and high pressures as well as columns which provide high separation efficiencies even at high flow rates.

MultoHigh-U columns have been developed specifically for the requirements of speed-optimized HPLC.

Hardware:
All CS HPLC columns are produced with high quality stainless steel hardware, which can stand high pressure forces (1,000 bar) permanently. Precision threads and connecting elements guarantee an optimal transfer of the sample into the column.
For protection of the packing of MultoHigh-U columns, a 1 µm frit was embedded directly into the sealing ring.

Stationary Phase:
The MultoHigh-U columns contain ultra high purity silica particles of 2 µm size. The extra narrow particle size distribution results in an ideal relation between separation efficiency and back pressure.
Thereby the benefits of fast HPLC can be used with standard HPLC systems (max. pressure of 400 bar) as well as UHPLC systems (max. pressure of 1,000 bar).

Specifications	Particle Size	Pore-Ø	Surface	C-Content
MultoHigh-U-C18	2.1 µm, 1.7 µm (C18)	120 Å	300 m^2/g	17 %

Advantages:
- Higher Resolution
- Higher Sensitivity
- Low Backperssure

→ **Fast Analyses**

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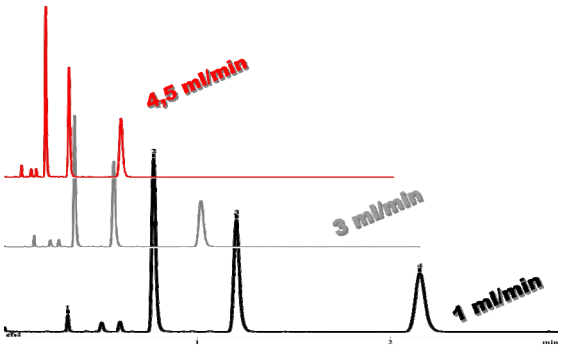
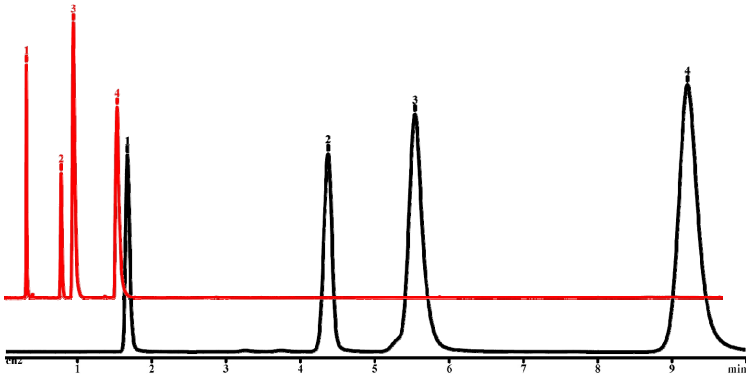
Increasing the Flow without Loss of Efficiency

This simple test with aromatic compounds shows that the flow can be increased without loss of separation efficiency. In combination with a reduction of column length, runtime of an analysis can be reduced by a factor of 10 easily.



Time Saving demonstrated on Separation of Tricyclic Antidepressants

Tricyclic antidepressants are basic drugs. These can be analyzed on a high quality C18 column like the Multospher 120 RP18-AQ. A change to a short MultoHigh U-C18 AQ column and a simultaneous increase of the flow can easily reduce the run time by a factor of 5-10. The example analysis below was done on a standard HPLC system at a pressure of 220 bar.



MultoHigh U-C18 AQ
50 x 4.6 mm
MeOH : Phosphate Buffer (pH 6)
3,0 mL/min

Multospher 120 RP18-AQ-5µ
150 x 4.6 mm
MeOH : Phosphate Buffer (pH 6)
1,0 mL/min

1. Uracil
2. Toluene
3. Doxepine
4. Amitriptyline

Excerpt of the delivery program	P/N 50 x 4.6 mm	P/N 50 x 4 mm	P/N 50 x 3 mm	P/N 50 x 2 mm
MultoHigh-U-C18	58619005	584190105	583190105	582190105
MultoHigh-U-C18 AQ	586190305	584190305	583190305	582190305

Excerpt of the delivery program	P/N 100 x 4.6 mm	P/N 100 x 4 mm	P/N 100 x 3 mm	P/N 100 x 2 mm
MultoHigh-U-C18	586190110	584190110	583190110	582190110
MultoHigh-U-C18 AQ	586190310	584190310	583190310	582190310

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