

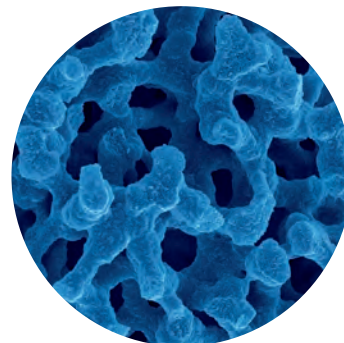
# Do you need trouble-free speed? The NEW Chromolith® HR





# ... then speed-up to Chromolith® HighResolution ...

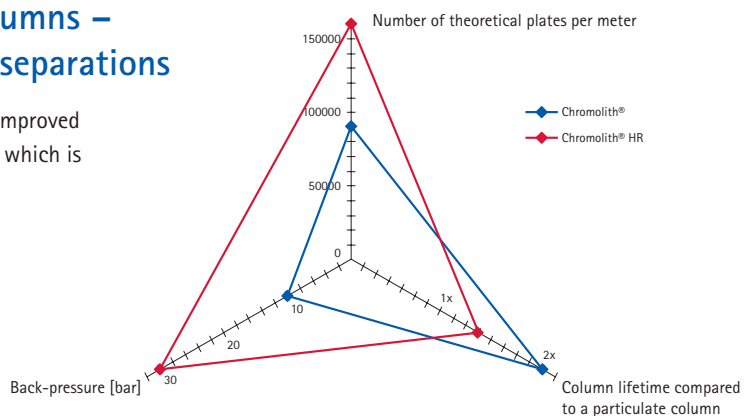
Revolutionary monolithic silica columns are not filled with particles like conventionally packed HPLC columns, but are a single rod of high purity monolithic silica. A unique bimodal pore structure, gives greatly improved chromatographic performance in terms of separation efficiency and column back-pressure. Macropores dramatically reduce the column back-pressure and allow the use of faster flow rates, thereby considerably reducing the analysis time.



*SEM picture of a cross section from a silica monolith  
Total porosity > 80 %*

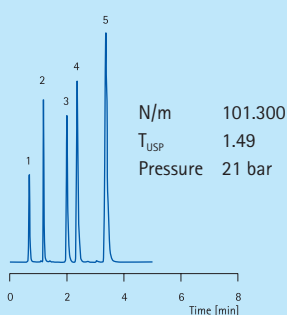
## Chromolith® HighResolution columns – the faster way for trouble-free separations

New Chromolith® HR offers higher efficiency and improved peak shape at the expense of higher back-pressure which is 2 time lower than particulate packed column.

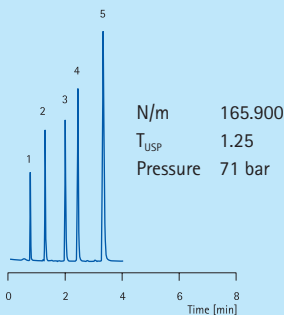


Chromolith®  
HighResolution  
100–4.6 mm

Chromolith® Performance  
RP-18e, 100–4.6mm



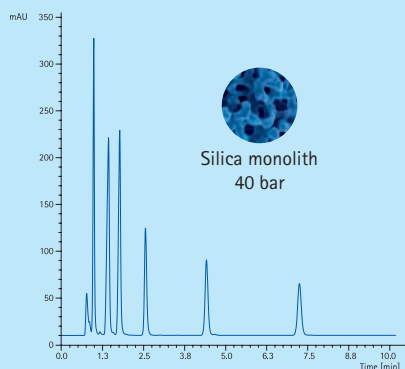
Chromolith® HighResolution  
RP-18e, 100–4.6mm



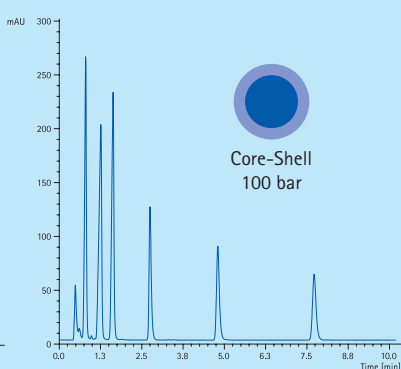
Mobile phase: Acetonitrile/water 60/40  
Flow rate: 2.0 ml/min  
Detection: UV 254 nm  
Temperature: ambient  
Inj. volume: 5 µL  
Sample:  
1. Urea  
2. Biphenyl-2-ol  
3. Progesterone  
4. Hexanophenon  
5. Anthracene

## Chromolith® HighResolution is the ideal alternative to a 3 µm particulate column

At 1 ml/min flow rate a chromatogram run on a Chromolith® HR column looks almost identical to the same chromatogram run on the corresponding particulate column. A Chromolith® HR is able to generate similar results to a column packed with core-shell particles, however at much lower back-pressure.



Silica monolith  
40 bar



Core-Shell  
100 bar

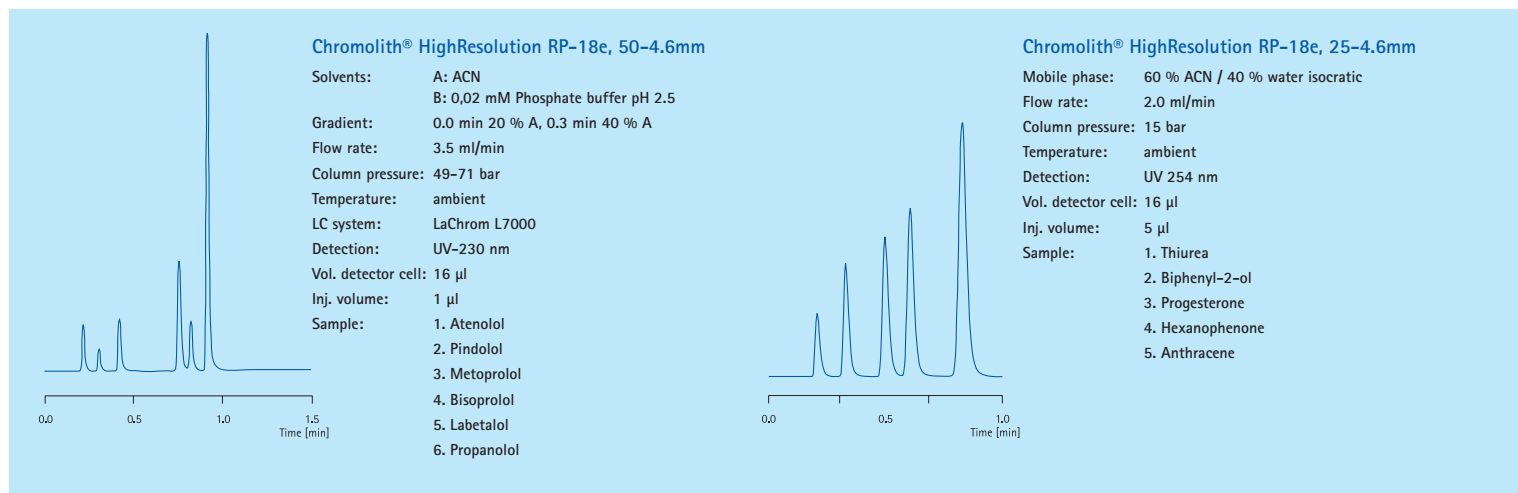
Mobile phase: A: Acetonitrile  
B: 20 mM Phosphate buffer pH 4.5  
Gradient: Time/min % A % B  
0.0 20 80  
12.0 40 60  
Flow rate: 1.0 ml/min  
Detection: UV 230 nm  
Temperature: 22 °C  
Inj. volume: 2 µL  
Sample:  
1. Ascorbic acid  
2. 4-Hydroxybenzoic acid  
3. Benzoic acid  
4. Sorbic acid  
5. Methyl-4-hydroxybenzoate  
6. Ethyl-4-hydroxybenzoate  
7. Propyl-4-hydroxybenzoate

## Easy method transfer from particulate to Chromolith® HPLC columns

Method transfer from particulate to monolithic Chromolith® columns is made easy since the chromatographic selectivity of Chromolith® columns is very similar to that of many modern particulate HPLC columns (e.g. Purospher®). Chromolith® columns are now included in the US Pharmacopeia in the L1, L3 and L7 categories.

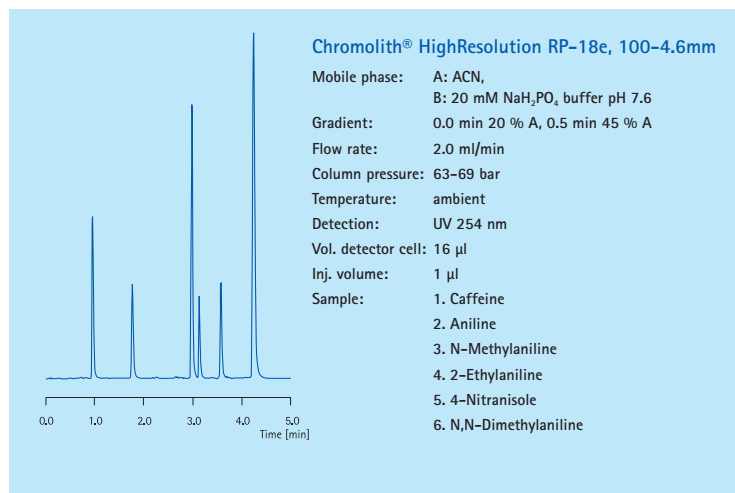
## Speed is there when you need it

Short monolithic columns will deliver ultra-fast results at low back-pressure for isocratic and gradient applications: high sample throughput and fast column re-equilibration between analyses.



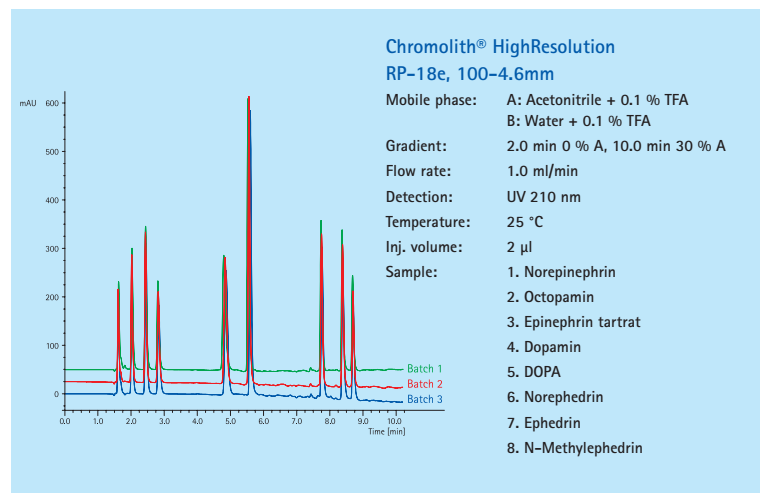
## Improved peak shape for basic compounds

Polar endcapped stationary phase enables the elution of basic compounds with no tailing.



## Excellent batch-to-batch reproducibility

The batch-to-batch reproducibility of Chromolith® HPLC columns is tightly controlled and fulfills the requirements for QA/QC laboratories.



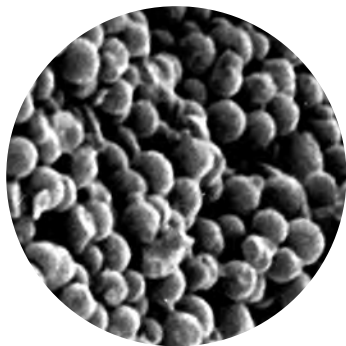
## Ordering information

Product	Length	Internal diameter	Content	Ord. No.
Chromolith® HighResolution RP-18e 100–4.6 mm	100 mm	4.6 mm	1 analytical column	M1520220001
Chromolith® HighResolution RP-18e 50–4.6 mm	50 mm	4.6 mm	1 analytical column	M1520210001
Chromolith® HighResolution RP-18e 25–4.6 mm	25 mm	4.6 mm	1 analytical column	M1520200001
Chromolith® HighResolution RP-18e 5–4.6 mm Guard Column Kit	5 mm	4.6 mm	3 trap columns + holder	M1520240001
Chromolith® HighResolution RP-18e 5–4.6 mm Guard Columns (pack of 3)	5 mm	4.6 mm	3 traps columns	M1520250001

# ... and be ahead of the traffic jam!

The new HighResolution Chromolith® column offers:

- column performance corresponds to 3  $\mu\text{m}$  particle packed columns and it is at least 50 % higher compared to our standard Chromolith columns
- back-pressure around 2 times lower compared to particulate packed columns
- 30 % longer column lifetime compared to particle packed columns



SEM picture of particulate silica



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