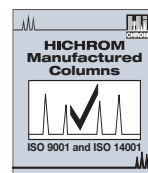


HICHROM C8 AND C18



- Ultra pure base deactivated porous silica
- Suitable for acidic, basic and neutral molecules
- 3.5 and 5µm particle sizes
- Excellent reproducibility
- Extended column lifetime

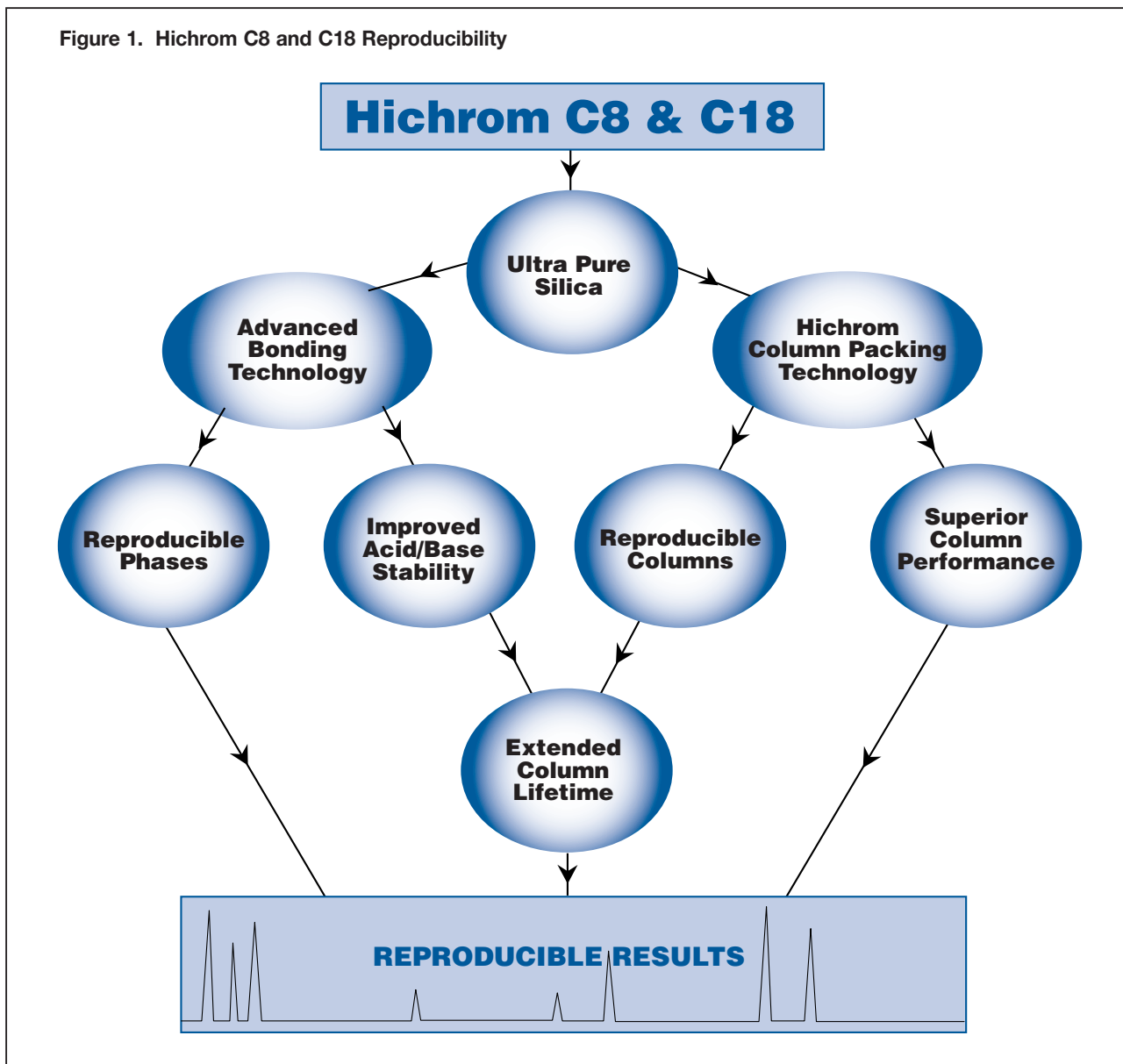
Hichrom's C8 and C18 columns offer market leading performances to tackle the most challenging reversed-phase applications. The use of an ultra pure silica, advanced bonding technology, superior column specification and comprehensive batch validation contribute to the column's excellent reproducibility (see Figure 1).

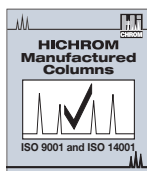
Hichrom Phases

Phase	Functional Group	Endcapped	Particle Size (µm)	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load (%)
C18	Octadecyl	Yes	3.5, 5	150	250	15
C8	Octyl	Yes	3.5, 5	150	250	8

HPLC Columns

Figure 1. Hichrom C8 and C18 Reproducibility



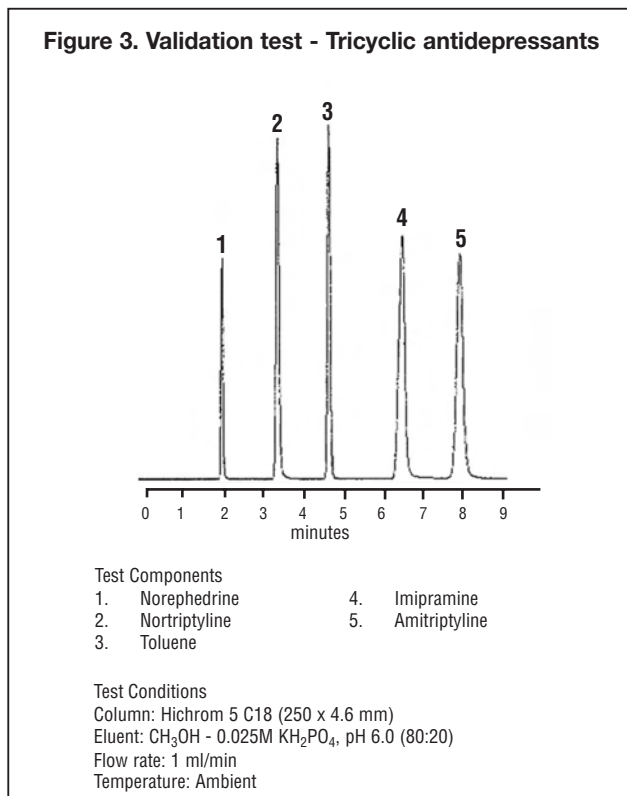
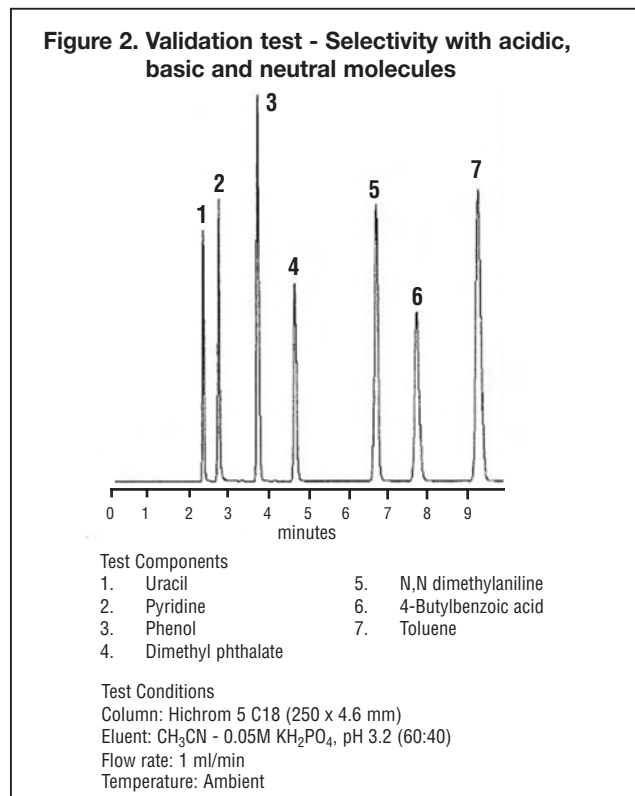


HICHROM C8 AND C18 (continued)

Excellent Batch Reproducibility

Combining an ultra pure silica with advanced bonding technology results in a densely bonded silica that is both highly robust and highly reproducible. Unpredictable interactions between residual silanol sites on the silica surface and the analyte are effectively eliminated.

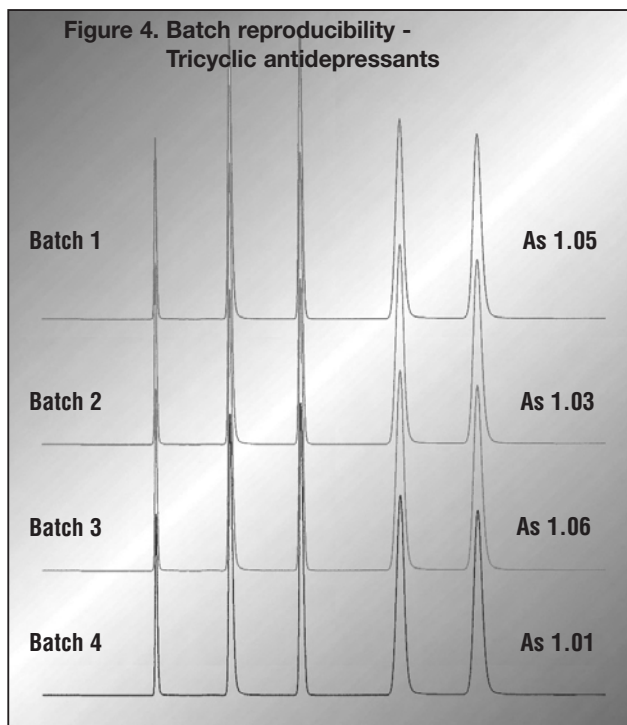
Comprehensive batch validation ensures absolute batch to batch reproducibility is maintained with acidic, basic and neutral molecules.



Figures 2 and 3 show two of the searching tests used during the validation of Hichrom C8 and C18 phases.

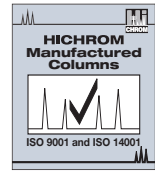
Figure 4 demonstrates the excellent selectivity match obtained with four Hichrom 5 C18 columns when subjected to the tricyclic antidepressants validation test. Each column is packed from a different batch of silica.

Please contact Hichrom for further product information or a brochure on the Hichrom C8 and C18 column range.



HPLC Columns

HICHROM C8 AND C18 (continued)



Excellent Column Efficiency

- 3.5µm columns > 150,000 plates/metre
- 5µm columns > 90,000 plates/metre

Careful control of all stages during the manufacturing process results in a high purity silica with a tight particle size distribution. This results in excellent column efficiencies with both 3.5 and 5µm materials.

Every Hichrom C8 and C18 column is individually manufactured and meticulously tested in the Hichrom laboratory. Efficiency measurements and two peak asymmetry calculations are recorded for each component of the quality control test mixture. Samples of the quality control test mixture are available on request. Only columns exceeding the most stringent efficiency and peak shape specifications are approved for sale.

All Hichrom C8 and C18 columns are supplied with a Test Chromatogram and Batch Validation Certificate. Information regarding column care and use is displayed on the reverse of the Test Chromatogram.

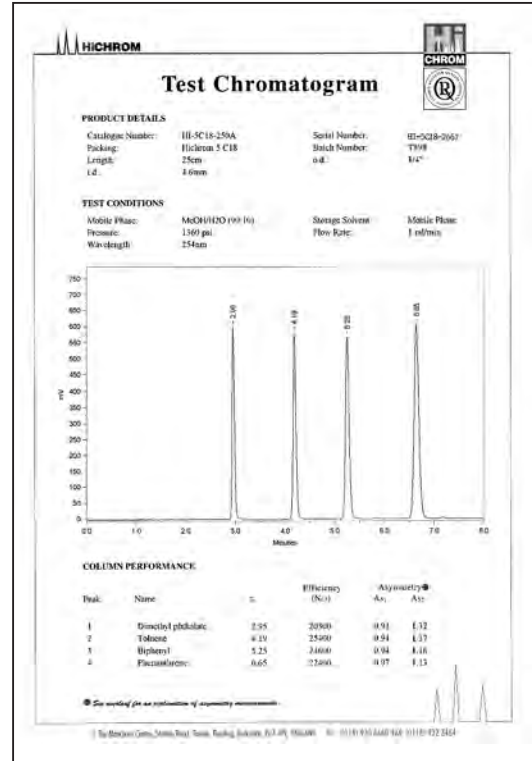
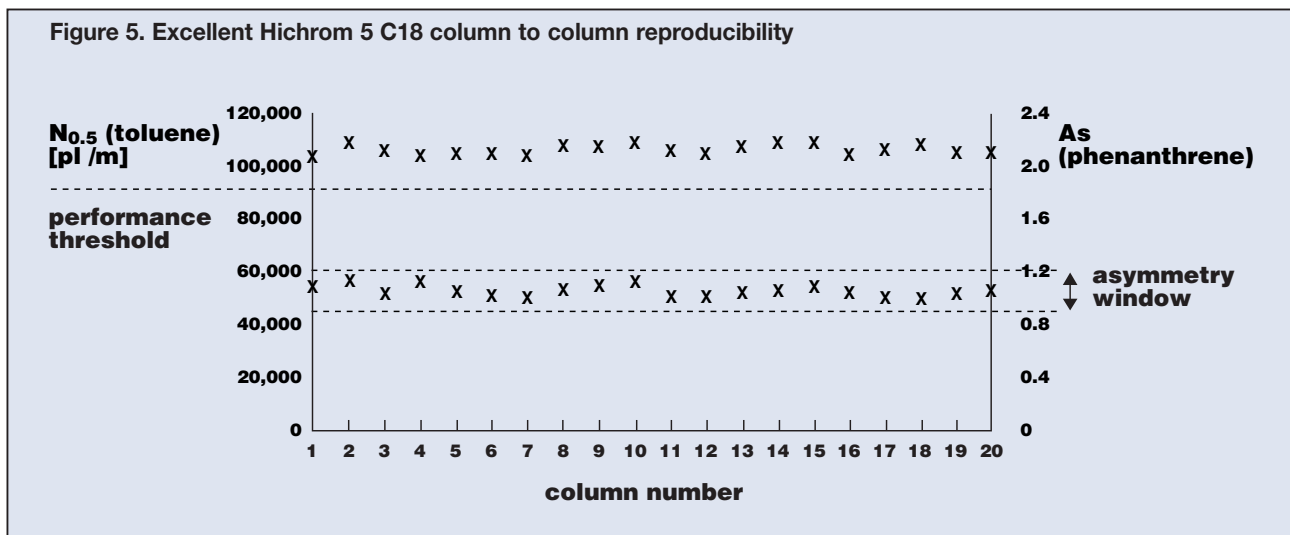
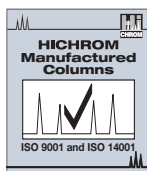


Figure 5 shows the analysis of twenty Hichrom 5 C18 columns under standard quality control conditions. Excellent efficiency, peak asymmetry and column to column reproducibility are demonstrated.

Please contact Hichrom for further product information or a brochure on the Hichrom C8 and C18 column range.



HPLC Columns



HICHROM C8 AND C18 (continued)

Extended Column Lifetime

Hichrom C8 and C18 columns exhibit extended lifetimes - the result of intensive research and development.

Bonding Stability

Combining a unique dense bonding process (preventing ligand cleavage at low pH) with a revolutionary capping process (shielding the silica from dissolution at high pH) enables Hichrom C8 and C18 columns to offer exceptional stability across an extended pH range. Figure 6 demonstrates the significantly improved acid robustness of a Hichrom 5 C18 column compared to a conventional C18 column. Hydrolysis of bonded phase is reflected by a decrease in retention.

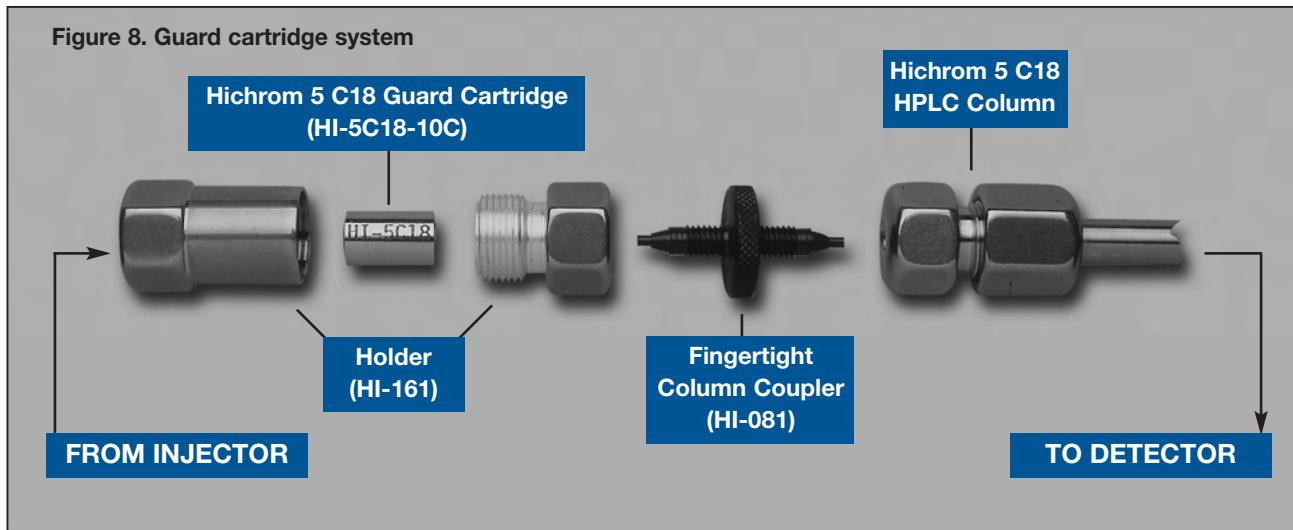
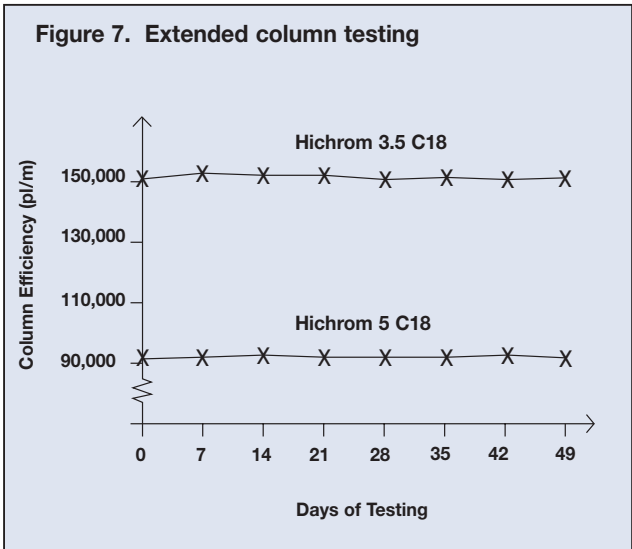
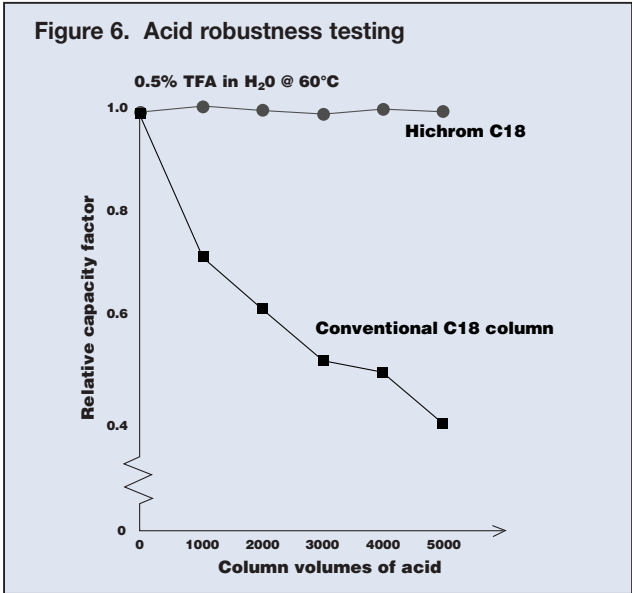
Column Robustness

A stable packed silica bed is critical to the long term performance of the column. Hichrom C8 and C18 columns are packed to extremely high efficiencies with excellent peak asymmetries, ensuring high performance is maintained throughout the column's lifetime. Figure 7 shows that the performance of both Hichrom 3.5µm C18 and Hichrom 5µm C18 columns remain unaffected after extended use.

Guard Cartridges

Guard cartridges are available for all Hichrom C8 and C18 column dimensions, to further extend column lifetime by preventing irreversible adsorption and frit blockage at the top of the column.

As shown by Figure 8, a fingertight column coupler (HI-081) is used to connect the guard holder (HI-161) to a Hichrom 5 C18 column. Further information on the guard cartridge range is listed on p.23, 24.



HPLC Columns

HICHROM C8 and C18 COLUMNS

HICHROM C8 AND C18 COLUMNS

Features

Ultra pure base deactivated porous silica
 Suitable for acidic, basic and neutral molecules
 3.5 and 5µm particle sizes
 Excellent reproducibility
 Extended lifetime

HICHROM PHASES

Phase	Functional Group	Endcapped	Particle Size (µm)	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load (%)
C18	Octadecyl	Yes	3.5, 5	150	250	15
C8	Octyl	Yes	3.5, 5	150	250	8

Microbore (1mm i.d. Columns)

Hichrom Phase	Column Dimensions (mm)					Guard ³ Cartridges (1.0mm i.d.)
	10x1.0 ¹	30x1.0 ²	50x1.0	150x1.0	250x1.0	
3.5µm						
C8	HI-3.5C8-10CEP	HI-3.5C8-30CEP	HI-3.5C8-50M	HI-3.5C8-150M	*	HI-3.5C8-10CE
C18	HI-3.5C18-10CEP	HI-3.5C18-30CEP	HI-3.5C18-50M	HI-3.5C18-150M	*	HI-3.5C18-10CE
5µm						
C8	HI-5C8-10CEP	HI-5C8-50CEP	HI-5C8-50M	HI-5C8-150M	HI-5C8-250M	HI-5C8-10CE
C18	HI-5C18-10CEP	HI-5C18-30CEP	HI-5C18-50M	HI-5C18-150M	HI-5C18-250M	HI-5C18-10CE

Microbore (2.1mm i.d.) Columns

Hichrom Phase	Column Dimensions (mm)					Guard ³ Cartridges (2.1mm i.d.)
	10x2.1 ¹	30x2.1 ²	50x2.1	150x2.1	250x2.1	
3.5µm						
C8	HI-3.5C8-10CMP	HI-3.5C8-30CMP	HI-3.5C8-50AM	HI-3.5C8-150AM	*	HI-3.5C8-10CM
C18	HI-3.5C18-10CMP	HI-3.5C18-30CMP	HI-3.5C18-50AM	HI-3.5C18-150AM	*	HI-3.5C18-10CM
5µm						
C8	HI-5C8-10CMP	HI-5C8-50CMP	HI-5C8-50AM	HI-5C8-150AM	HI-5C8-250AM	HI-5C8-10CM
C18	HI-5C18-10CMP	HI-5C18-30CMP	HI-5C18-50AM	HI-5C18-150AM	HI-5C18-250AM	HI-5C18-10CM

Medium Bore (3.2mm i.d.) Columns

Hichrom Phase	Column Dimensions (mm)					Guard ³ Cartridges (3.2mm i.d.)
	10x3.2 ¹	30x3.2 ²	50x3.2	150x3.2	250x3.2	
3.5µm						
C8	HI-3.5C8-10CSP	HI-3.5C8-30CSP	HI-3.5C8-50AS	HI-3.5C8-150AS	*	HI-3.5C8-10C
C18	HI-3.5C18-10CSP	HI-3.5C18-30CSP	HI-3.5C18-50AS	HI-3.5C18-150AS	*	HI-3.5C18-10C
5µm						
C8	HI-5C8-10CSP	HI-5C8-50CSP	HI-5C8-50AS	HI-5C8-150AS	HI-5C8-250AS	HI-5C8-10C
C18	HI-5C18-10CSP	HI-5C18-30CSP	HI-5C18-50AS	HI-5C18-150AS	HI-5C18-250AS	HI-5C18-10C

HICHROM C8 and C18 COLUMNS

Analytical (4.0mm i.d.) Columns

Hichrom Phase	Column Dimensions (mm)					Guard ³ Cartridges (4.0mm i.d.)
	10x4.0 ¹	30x4.0 ²	50x4.0	150x4.0	250x4.0	
3.5µm						
C8	*	*	HI-3.5C8-50AF	HI-3.5C8-150AF	*	HI-3.5C8-10C
C18	*	*	HI-3.5C18-50AF	HI-3.5C18-150AF	*	HI-3.5C18-10C
5µm						
C8	*	*	HI-5C8-50AF	HI-5C8-150AF	HI-5C8-250AF	HI-5C8-10C
C18	*	*	HI-5C18-50AF	HI-5C18-150AF	HI-5C18-250AF	HI-5C18-10C

Analytical (4.6mm i.d.) Columns

Hichrom Phase	Column Dimensions (mm)					Guard ³ Cartridges (4.6mm i.d.)
	10x4.6 ¹	30x4.6 ²	50x4.6	150x4.6	250x4.6	
3.5µm						
C8	HI-3.5C8-10CAP	HI-3.5C8-30CAP	HI-3.5C8-50A	HI-3.5C8-150A	*	HI-3.5C8-10C
C18	HI-3.5C18-10CAP	HI-3.5C18-30CAP	HI-3.5C18-50A	HI-3.5C18-150A	*	HI-3.5C18-10C
5µm						
C8	HI-5C8-10CAP	HI-5C8-30CAP	HI-5C8-50A	HI-5C8-150A	HI-5C8-250A	HI-5C8-10C
C18	HI-5C18-10CAP	HI-5C18-30CAP	HI-5C18-50A	HI-5C18-150A	HI-5C18-250A	HI-5C18-10C

Semi-Preparative (7.75mm i.d.) Columns

Hichrom Phase	Column Dimensions (mm)					Guard ⁵ Cartridges (7.75mm i.d.)
	50x7.75	75x7.75	100x7.75	150x7.75	250x7.75	
5µm						
C8	HI-5C8-50SP	HI-5C8-75SP	HI-5C8-100SP	HI-5C8-150SP	HI-5C8-250SP	HI-5C8-10CP
C18	HI-5C18-10SP	HI-5C18-75SP	HI-5C18-100SP	HI-5C18-150SP	HI-5C18-250SP	HI-5C18-10C

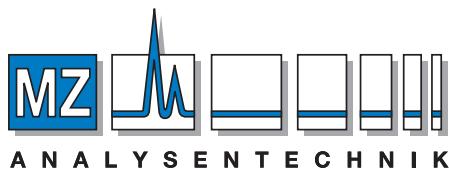
Semi-Preparative (10.0mm i.d.) Columns

Hichrom Phase	Column Dimensions (mm)					Guard ⁵ Cartridges (10.0mm i.d.)
	50x10.0	75x10.0	100x10.0	150x10.0	250x10.0	
5µm						
C8	HI-5C8-50SP1	HI-5C8-75SP1	HI-5C8-100SP1	HI-5C8-150SP1	HI-5C8-250SP1	HI-5C8-10CP
C18	HI-5C18-50SP1	HI-5C18-75SP1	HI-5C18-100SP1	HI-5C18-150SP1	HI-5C18-250SP1	HI-5C18-10CP

Preparative (21.2mm i.d.) Columns

Hichrom Phase	Column Dimensions (mm)					Guard ⁵ Cartridges (21.2mm i.d.)
	50x21.2	75x21.2	100x21.2	150x21.2	250x21.2	
5µm						
C8	HI-5C8-50P	HI-5C8-75P	HI-5C8-100P	HI-5C8-150P	HI-5C8-250S1	HI-5C8-10CP
C18	HI-5C18-50P	HI-5C18-75P	HI-5C18-100P	HI-5C18-150P	HI-5C18-250P	HI-5C18-10CP

- 1=Use with free standing holder HI-161
- 2=Use with free standing holder HI-161
- 3=Use with free standing holder HI-161 and column coupler HI-081
- 4=1/pk, 3/pk, 10/pk and starter kits also available
- 5=Use with free-standing holder HI-150 and column coupler HI-081
- 6=3/pk also available



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