



# HICHROM

Chromatography Columns and Supplies

## HPLC Column & Materials Hichrom RPB



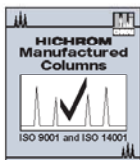
**Catalogue 8**

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# HICHROM RPB

- High purity base deactivated silica
- 3.5, 5 and 10µm particle sizes
- Unique C8/C18 multi-alkyl phase
- Excellent chromatography
- Competitively priced

Hichrom RPB is a high purity base deactivated silica which offers a unique selectivity due to the unique C8/C18 multi-alkyl bonding and exhaustive endcapping employed. Recent additions to the range include 3.5 and 10µm phases, which are suitable for LC-MS applications and preparative separations respectively.

Phase	Functional Group	Endcapped	Particle Size (µm)	Pore Size (Å)	Surface Area (m <sup>2</sup> /g)	Carbon Load (%)
RPB	C8/C18 multi-alkyl	Yes	3.5, 5, 10	110	340	14

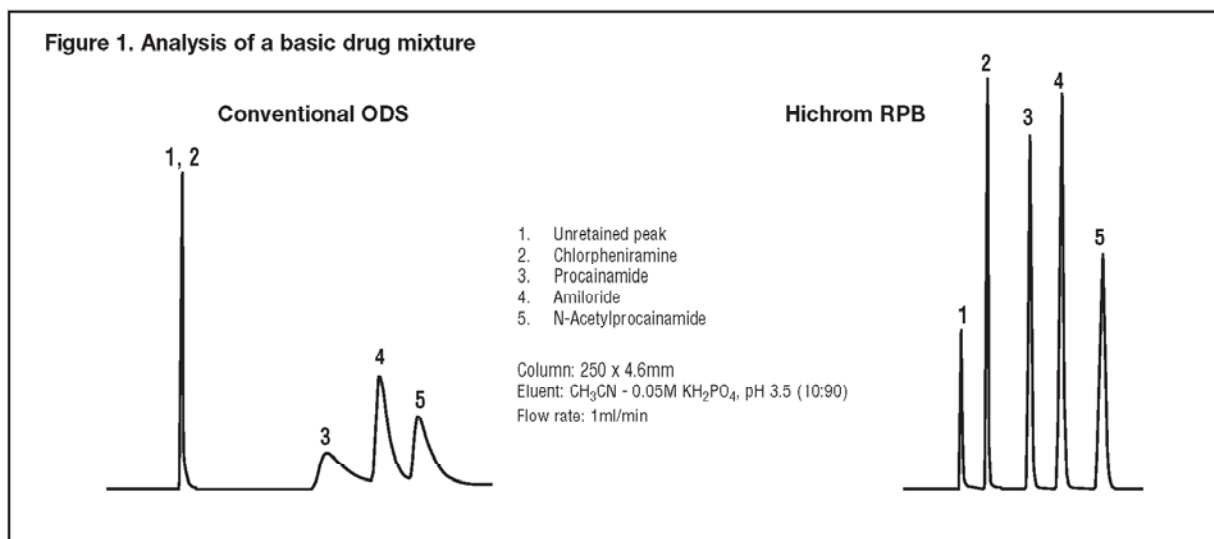
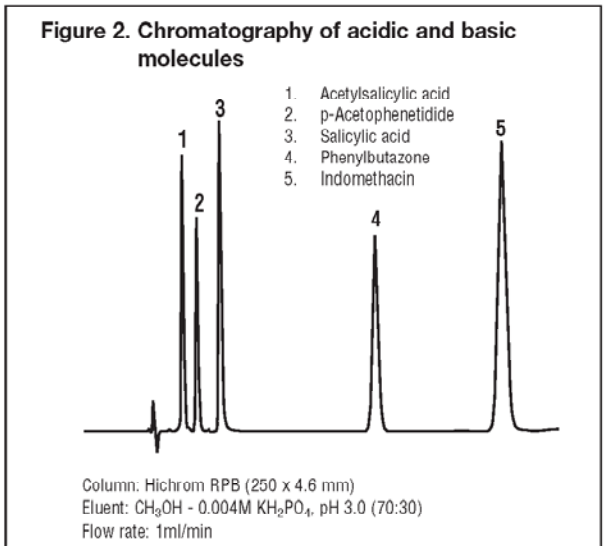
## Chromatography of Acidic and Basic Molecules

Hichrom RPB is specifically designed for the Reversed-Phase separation of Basic molecules. The use of organic modifiers is minimised.

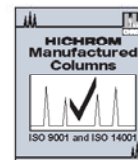
In addition to basic molecules, acids can be similarly chromatographed under suitably buffered conditions (see Figure 2).

Residual acidic sites have been eliminated whilst monolayer coverage of the high purity silica surface has been retained to obtain optimum plate efficiency. Both octyl- and octadecylsilanes are bonded to give a material which combines the robustness of a C18 phase with the high coverage of a C8 phase.

In Figure 1 a selected mixture of basic drugs is chromatographed. Using buffered eluent conditions, comparison between a conventional ODS and a Hichrom RPB column shows the superior performance of the latter material. Amiloride, a strong base, is widely used as a diuretic. Isolated amino-groups make it extremely difficult to chromatograph this molecule satisfactorily. Excellent peak shape is obtained for this and the other drug molecules investigated - leading to the development of more sensitive assay methods.



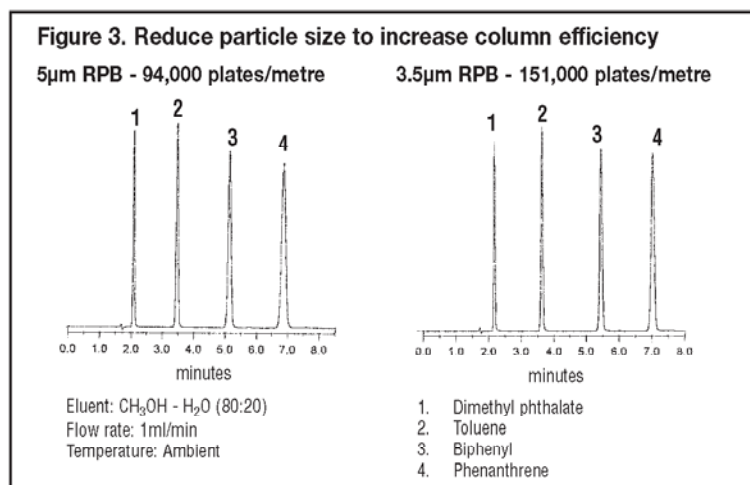
HPLC Columns



## High Efficiency Columns:

- 3.5µm > 145,000 plates/metre
- 5µm > 90,000 plates/metre
- 10µm > 50,000 plates/metre

The introduction of Hichrom 3.5µm RPB allows the chromatographer to decrease column length without sacrificing efficiency. This results in increased productivity due to reduced analysis time. Figure 3 compares the efficiency obtained under standard quality control conditions for 150 x 4.6mm i.d. Hichrom 5µm RPB and Hichrom 3.5µm RPB columns.



## Ordering Information - Hichrom Manufactured Columns

## Microbore (1mm i.d.) Columns

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>2</sup> (For 1.0mm i.d. Columns)
	50 x 1.0	100 x 1.0	150 x 1.0	250 x 1.0	
3.5µm RPB	HI-3.5RPB-50M	HI-3.5RPB-100M	HI-3.5RPB-150M	-	HI-3.5RPB-10CE5
5µm RPB	HIRPB-50M	HIRPB-100M	HIRPB-150M	HIRPB-250M	HIRPB-10CE5

## Microbore (2.1mm i.d.) Columns

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>2</sup> (For 2.1mm i.d. Columns)
	50 x 2.1	100 x 2.1	150 x 2.1	250 x 2.1	
3.5µm RPB	HI-3.5RPB-50AM	HI-3.5RPB-100AM	HI-3.5RPB-150AM	-	HI-3.5RPB-10CM5
5µm RPB	HIRPB-50AM	HIRPB-100AM	HIRPB-150AM	HIRPB-250AM	HIRPB-10CM5

## Medium Bore (3.2mm i.d.) Columns

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>2</sup> (For 3.2 mm i.d. Columns)
	50 x 3.2	100 x 3.2	150 x 3.2	250 x 3.2	
3.5µm RPB	HI-3.5RPB-50AS	HI-3.5RPB-100AS	HI-3.5RPB-150AS	-	HI-3.5RPB-10C5
5µm RPB	HIRPB-50AS	HIRPB-100AS	HIRPB-150AS	HIRPB-250AS	HIRPB-10C5

## Analytical (4.0 mm i.d.) Columns

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>2</sup> (For 4.0 mm i.d. Columns)
	50 x 4.0	100 x 4.0	150 x 4.0	250 x 4.0	
3.5µm RPB	HI-3.5RPB-50AF	HI-3.5RPB-100AF	HI-3.5RPB-150AF	-	HI-3.5RPB-10C5
5µm RPB	HIRPB-50AF	HIRPB-100AF	HIRPB-150AF	HIRPB-250AF	HIRPB-10C5

<sup>1</sup> Other column dimensions available - please enquire

<sup>2</sup> Starter kits (£110) available - see p.27

<sup>3</sup> Use with free-standing holder HI-161 (£45) and column coupler HI-081 (£15) - see p.26



**HICHROM RPB (continued)**

**Analytical (4.6 mm i.d.) Columns**

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>2</sup> (For 4.6 mm i.d. Columns)
	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	
3.5µm RPB	HI-3.5RPB-50A	HI-3.5RPB-100A	HI-3.5RPB-150A	-	HI-3.5RPB-10C5
5µm RPB 10µm RPB	HIRPB-50A HI-10RPB-50A	HIRPB-100A HI-10RPB-100A	HIRPB-150A HI-10RPB-150A	HIRPB-250A HI-10RPB-250A	HIRPB-10C5 HI-10RPB-10C5

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

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>4</sup> (For 7.75 mm i.d. Columns)
	50 x 7.75	100 x 7.75	150 x 7.75	250 x 7.75	
5µm RPB	HIRPB-50SP	HIRPB-100SP	HIRPB-150SP	HIRPB-250SP	HIRPB-10CP3
10µm RPB	HI-10RPB-50SP	HI-10RPB-100SP	HI-10RPB-150SP	HI-10RPB-250SP	HI-10RPB-10CP3

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

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>4</sup> (For 10.0 mm i.d. Columns)
	50 x 10.0	100 x 10.0	150 x 10.0	250 x 10.0	
5µm RPB	HIRPB-50SP1	HIRPB-100SP1	HIRPB-150SP1	HIRPB-250SP1	HIRPB-10CP3
10µm RPB	HI-10RPB-50SP1	HI-10RPB-100SP1	HI-10RPB-150SP1	HI-10RPB-250SP1	HI-10RPB-10CP3

**Preparative (21.2 mm i.d.) Columns**

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>4</sup> (For 21.2 mm i.d. Columns)
	50 x 21.2	100 x 21.2	150 x 21.2	250 x 21.2	
5µm RPB	HIRPB-50P	HIRPB-100P	HIRPB-150P	HIRPB-250P	HIRPB-10CP3
10µm RPB	HI-10RPB-50P	HI-10RPB-100P	HI-10RPB-150P	HI-10RPB-250P	HI-10RPB-10CP3

**Preparative (30.0 mm i.d.) Columns**

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>5</sup> (For 30.0 mm i.d. Columns)
	50 x 30.0	100 x 30.0	150 x 30.0	250 x 30.0	
5µm RPB	HIRPB-50P3	HIRPB-100P3	HIRPB-150P3	HIRPB-250P3	HIRPB-20CP
10µm RPB	HI-10RPB-50P3	HI-10RPB-100P3	HI-10RPB-150P3	HI-10RPB-250P3	HI-10RPB-20CP

<sup>1</sup> Other column dimensions available - please enquire  
<sup>2</sup> Use with free-standing holder HI-161 and column coupler HI-081 - see p.26  
<sup>3</sup> Starter kits also available - see p.27  
<sup>4</sup> Use with free-standing holder HI-150 and column coupler HI-081 (£15)  
<sup>5</sup> Use with free-standing holder HI-183 and column coupler HI-083 (£15)

HPLC Columns