



# HICHROM

Chromatography Columns and Supplies

LC COLUMNS  
Hichrom RPB

Catalogue 9

## Hichrom Limited

1 The Markham Centre, Station Road  
Theale, Reading, Berks, RG7 4PE, UK

Tel: +44 (0)118 930 3660 Fax: +44 (0)118 932 3484

Email: [sales@hichrom.co.uk](mailto:sales@hichrom.co.uk) [www.hichrom.co.uk](http://www.hichrom.co.uk)

## Hichrom RPB

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

Hichrom RPB is a high purity base deactivated silica which offers a unique selectivity due to the proprietary C8/C18 multi-alkyl bonding and exhaustive endcapping employed. The range includes 3.5, 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

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

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.

Excellent peak shapes are obtained for basic drug molecules. In addition, acids and bases can be similarly chromatographed under suitably buffered conditions (see Figure 1).

Column: Hichrom RPB (250 x 4.6mm)  
 Eluent: CH<sub>3</sub>OH - 0.004M KH<sub>2</sub>PO<sub>4</sub>, pH 3.0 (70:30)  
 Flow rate: 1ml/min

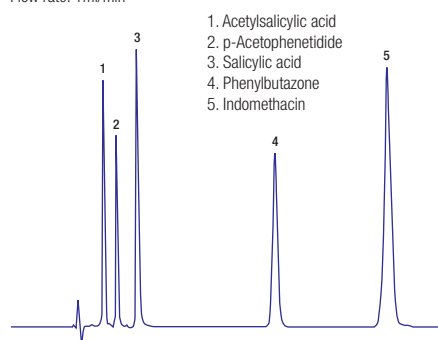


Figure 1. Chromatography of acidic and basic molecules

5µm RPB - 94,000 plates/metre

3.5µm RPB - 151,000 plates/metre

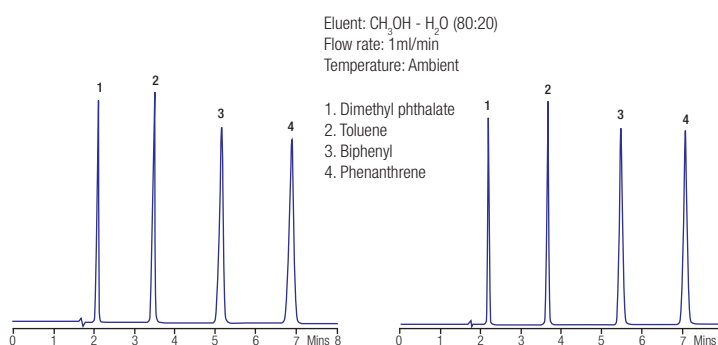


Figure 2. Reduce particle size to increase column efficiency

### High Efficiency Columns:

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

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 2 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 RPB

#### Microbore (1.0mm 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	-	(5/µk) <sup>3</sup> HI-3.5RPB-10CE5
5µm RPB	HIRPB-50M	HIRPB-100M	HIRPB-150M	HIRPB-250M	(5/µk) <sup>3</sup> HIRPB-10CE5

<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. 24

<sup>3</sup> Starter kits

available – see p. 25

**Ordering Information - Hichrom RPB (continued)**
**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	-	(5/pk) <sup>3</sup> HI-3.5RPB-10CM5
5µm RPB	HIRPB-50AM	HIRPB-100AM	HIRPB-150AM	HIRPB-250AM	(5/pk) <sup>3</sup> HIRPB-10CM5

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

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>2</sup> (For 3.2mm 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	-	(5/pk) <sup>3</sup> HI-3.5RPB-10C5
5µm RPB	HIRPB-50AS	HIRPB-100AS	HIRPB-150AS	HIRPB-250AS	(5/pk) <sup>3</sup> HIRPB-10C5

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

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>2</sup> (For 4.0mm 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	-	(5/pk) <sup>3</sup> HI-3.5RPB-10C5
5µm RPB	HIRPB-50AF	HIRPB-100AF	HIRPB-150AF	HIRPB-250AF	(5/pk) <sup>3</sup> HIRPB-10C5

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

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>2</sup> (For 4.6mm 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	-	(5/pk) <sup>3</sup> HI-3.5RPB-10C5
5µm RPB	HIRPB-50A	HIRPB-100A	HIRPB-150A	HIRPB-250A	(5/pk) <sup>3</sup> HIRPB-10C5
10µm RPB	HI-10RPB-50A	HI-10RPB-100A	HI-10RPB-150A	HI-10RPB-250A	HI-10RPB-10C5

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

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>4</sup> (For 7.75mm 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	(3/pk) HIRPB-10CP3
10µm RPB	HI-10RPB-50SP	HI-10RPB-100SP	HI-10RPB-150SP	HI-10RPB-250SP	(3/pk) HI-10RPB-10CP3

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

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>4</sup> (For 10.0mm 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	(3/pk) HIRPB-10CP3
10µm RPB	HI-10RPB-50SP1	HI-10RPB-100SP1	HI-10RPB-150SP1	HI-10RPB-250SP1	(3/pk) HI-10RPB-10CP3

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

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>4</sup> (For 21.2mm 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	(3/pk) HIRPB-10CP3
10µm RPB	HI-10RPB-50P	HI-10RPB-100P	HI-10RPB-150P	HI-10RPB-250P	(3/pk) HI-10RPB-10CP3

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

Hichrom Phase	Column Dimensions <sup>1</sup> (mm)				Guard Cartridges <sup>5</sup> (For 30.0mm 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	(1/pk) HIRPB-20CP
10µm RPB	HI-10RPB-50P3	HI-10RPB-100P3	HI-10RPB-150P3	HI-10RPB-250P3	(1/pk) 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. 24

<sup>3</sup> Starter kits available – see p. 25

<sup>4</sup> Use with free-standing holder HI-150 and column coupler HI-081

<sup>5</sup> Use with free-standing holder HI-183 and column coupler HI-083