



HICHROM

Chromatography Columns and Supplies

LC COLUMNS
Hichrom RPB

Catalogue 9

Hichrom Limited

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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

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 ² /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: CH₃OH - 0.004M KH₂PO₄, pH 3.0 (70:30)
 Flow rate: 1 ml/min

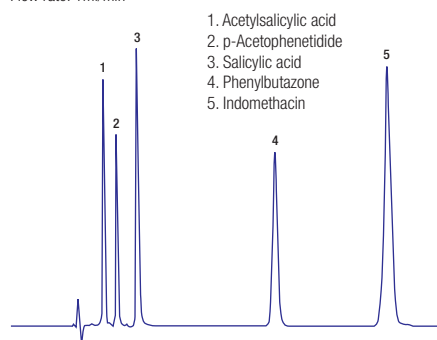


Figure 1. Chromatography of acidic and basic molecules

5µm RPB - 94,000 plates/metre

3.5µm RPB - 151,000 plates/metre

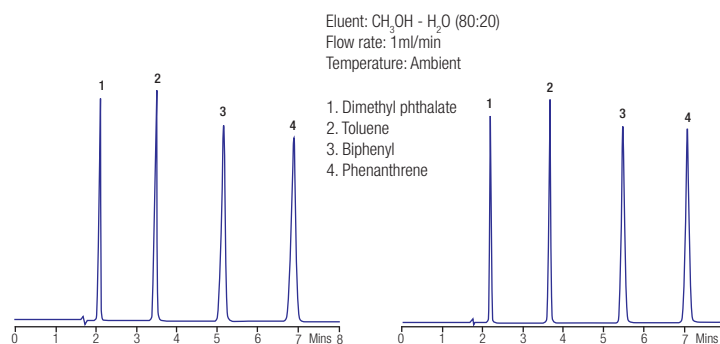


Figure 2. Reduce particle size to increase column efficiency

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.