Hamilton PRP®-h1 HPLC Columns

Hamilton PRP®-h1 Polymer HPLC Columns

- **Chemical Stability**
- **Full pH Range Stability**
- **Temperature Stability**

The PRP-h1 column line from Hamilton offers a robust alternative to silica based and traditional polymer HPLC columns.

Total Compatibility

The PRP-h1 is a high performance, polymeric, reversed-phase column that delivers separations of a wide variety of analytes under the most extreme analytical conditions. Virtually any organic solvent and mobile phase additives can be employed to optimize analyte separation.

A highly cross-linked poly(styrene-co-divinylbenzene) polymer (PS-DVB) provides the necessary mechanical stability to withstand most solvents while delivering excellent resolution and superior performance run after run.

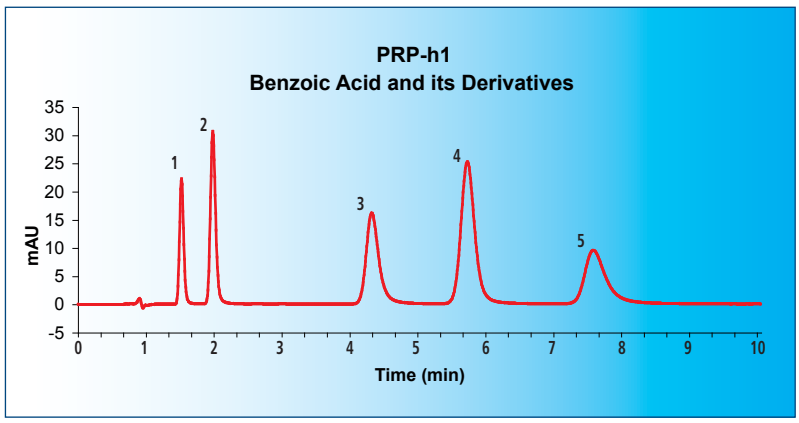
Extended Column Life

Because there is no bonded phase in polymer materials as is the case with silica columns, even harsh solvents such as 1 molar sodium hydroxide can be used to wash contaminants from the column, thus increasing column lifetime.

Mobile phases with pH ranging from 1 to 13 can be used without damaging or degrading the stationary phase. This wide pH range opens up more possibilities of solvents and buffers that can be used to elucidate a great separation.

Wide Temperature Range

Common HPLC separation temperatures range between 20 and 85 °C and in some cases may go above 100 °C. Most traditional silica-based columns are typically limited to 60 °C, but the PRP-h1 is designed to handle elevated temperatures above 100 °C.



Column: PRP-h1, 5µ, 100Å
Dimensions: 4.1 x 50 mm
Mobile Phase: A: 10 mmol/L sodiumdihydrogenphosphate, pH = 2.2 **B:** Acetonitrile
Gradient: 18% B (Isocratic)
Flow Rate: 0.60 mL/min
Column Temperature: 50 °C
Detection: UV @ 230 nm
Injection Volume: 5 µL
Sample:
1. 2,4-Dihydroxybenzoic Acid
2. 4-Hydroxybenzoic Acid
3. 2-Acetoxybenzoic Acid (Aspirin)
4. Benzoic Acid
5. 2-Hydroxybenzoic Acid (Salicylic Acid)

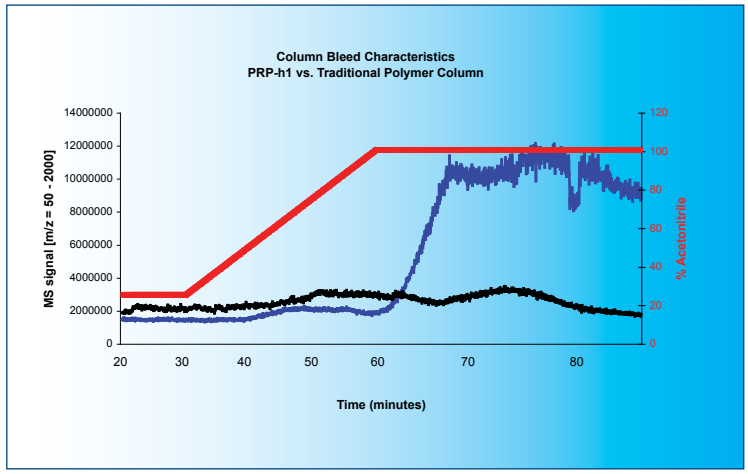
HAMILTON

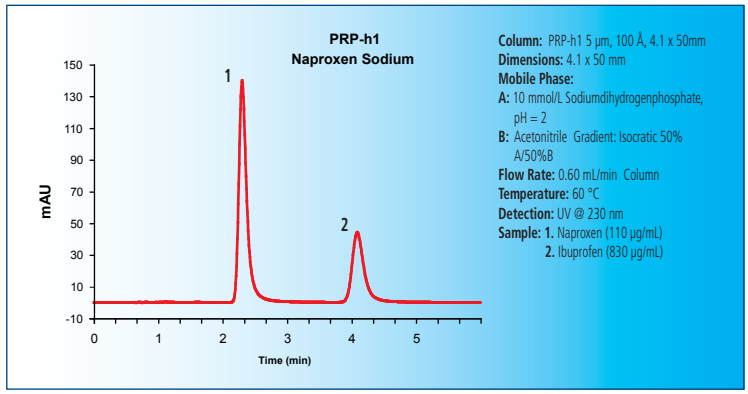
LC/MS Ready

Column bleed can be observed in standard polymer columns due to trapped impurities and un-reacted oligomers. The problem is very noticeable when using mobile phases containing higher percentages of organic solvents, but the PRP-h1 displays minimal column bleed aspects even when using 100% organic solvents. Low bleed characteristics make the PRP-h1 ideal for mass spectrometry applications where sensitivity is a must.

Lower Pressure Operation

Unlike traditional polymer columns, PRP-h1 columns produce much lower system pressures commonly encountered in HPLC. A high degree of cross-linking combined with a proprietary polymer manufacturing process minimizes polymer swelling and gives reproducible results at half the pressure of most other polymer HPLC columns. The superior resolution of PRP-h1 delivers the right separation, speeding up method development, validation and production.





Column: PRP-h1 5 µm, 100 Å, 4.1 x 50mm
Dimensions: 4.1 x 50 mm
Mobile Phase:
A: 10 mmol/L Sodiumdihydrogenphosphate, pH = 2
B: Acetonitrile Gradient: Isocratic 50% A/50%B
Flow Rate: 0.60 mL/min Column
Temperature: 60 °C
Detection: UV @ 230 nm
Sample: 1. Naproxen (110 µg/mL)
2. Ibuprofen (830 µg/mL)

Technical Data

Material:	Cross-linked poly(styrene-co-divinylbenzene) polymer
Particle size:	5 µ
Pore size:	100 Å

Ordering Information

HPLC Columns

	PRP-h1 (100 Å)			
	50 mm	**100 mm**	**150 mm**	**250 mm**
2.1 mm ID		79250	79249	
4.6 mm ID	79251	79252	79253	79256
10 mm ID		79255	79266	
100 mm ID				79523

Guard Columns

	PRP-h1
Analytical Guard Column Starter Kit (1 holder, 2 cartridges)	79257
Analytical Replacement Cartridges (5/pk)	79258
Semiprep/Prep Guard Column Starter Kit (1 holder, 2 cartridges)	79275
Simiprep/Prep Replacement Cartridges (2/pk)	79276

Bulk Resin

	PRP-h1
12-20 µm Bulk Resin (1 Gram)	79279

HAMILTON
THE MEASURE OF EXCELLENCE™

Hamilton Company
4970 Energy Way
Reno, Nevada 89520 USA
Toll Free: 800 648-5950
Telephone: +1-775-858-3000
Fax: +1-775-856-7259
e-mail: sales@hamiltoncompany.com

Hamilton Bonaduz AG
Via Crusch 8
CH-7402
Bonaduz/Switzerland
Telephone: +41-(0)81-660-60-60
Fax: +41-(0)81-660-60-60
e-mail: marketing@hamilton.ch

www.hamiltoncompany.com

Lit. No. L80077 © Hamilton Company 2/07 2.5k Printed in U.S.A.