



## Column Care and Usage

Catalog Number: 802, 880, 890  
Column Type: BP-100 H<sup>+</sup>, Hydrogen Form for Carbohydrate Analysis

*The following information will help you achieve optimal column performance.*

### ► Eluents

Using an isocratic system, the mobile phase would be de-ionized water. Column performance and life is greatly affected by the composition of the mobile phase. As a result, only the highest grade, pre-filtered, degassed mobile phases should be used for HPLC applications. All mobile phases should be filtered (0.45 µm or smaller) and degassed prior to use.

### ► Selectivity

Selectivity is normally controlled by changing column type as opposed to changing eluent. Retention times increase in the following sequence: Pb<sup>2+</sup> > Ca<sup>2+</sup> > Ag<sup>+</sup> > Na<sup>+</sup> > H<sup>+</sup>. Retention times of polar samples may be increased and non-polar interactions reduced with the addition of organic solvents. However, due to low cross-linking of the resin, Benson Polymeric does not recommend the use of organic solvents. If your application calls for the addition of organic solvents, please contact the company for assistance.

### ► Temperature

For best overall separation of carbohydrates, 85°C is the recommended operating temperature. **ALWAYS, pre-heat the column and stabilize the temperature prior to pumping mobile phase.**

### ► Sample Preparation

Samples may contain precipitates or other contaminants such as metal compounds which bind with the resin. These contaminants change the column chemistry, resulting in a decrease in the effective surface area of the column and decreasing sample retention. To provide maximum protection for the analytical column, use a guard column and pre-filter all samples through a 0.45 µm or smaller filter membrane prior to injection. Compounds which may bind irreversibly with the resins should be removed using solid phase extraction (SPE) procedures.

### ► General Operating Conditions

Max. Pressure (psi): 1500  
Max. Temperature (°C): 90  
Max. Flow Rate (mL/min): 1.2 at 90°C

### ► Column Storage

Columns may be stored in the recommended eluent for several days. Long term storage should be in de-ionized water. Storage in other mobile phases may support bacterial growth leading to reduced capacity and/or high back pressure. Do not let the columns dry out. Replace and tighten end plugs when storing. Columns may be refrigerated but do not freeze.

### ► Cleaning and Regeneration

Metal contamination is indicated by shortened retention times and/or skewed peaks. Carbohydrate columns in the hydrogen form should be pumped in reverse flow mode at 0.1mL/min., with 0.1M H<sub>2</sub>SO<sub>4</sub> at a temperature of 25°C for 4-6 hours.

To remove organic contamination, pump the columns in reverse flow at 0.1mL/min. with 5/95 acetonitrile/water at 25°C for 4 hours.

No regeneration procedure is available if the column has bacterial growth.

### ► Thank You

Thank you for purchasing a Benson Polymeric column. With over 40 years of experience in resin manufacturing, column packing and applications development, we are highly qualified to assist you in achieving optimum chromatographic results. As a customer you deserve the highest quality products and service available in the industry

### ► Other Related Products

<u>Part Number</u>	<u>Descriptions</u>	<u>Dimensions</u>
802G	BP-100 H <sup>+</sup> Guard	50 x 4.6 mm
880	BP-100 H <sup>+</sup>	150 x 7.8 mm
890	BP-100 H <sup>+</sup>	150 x 4.6 mm

050	\$50 Guard Column Re-packing Discount
100	\$100 Analytical Column Re-packing Discount

**Other column formats available upon request.**

Don't forget to visit us at our website at:  
You can also contact us at:

[www.bensonpolymeric.com](http://www.bensonpolymeric.com)  
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