Column Care & Usage

Catalog Numbers: 2000-0
Column Type: BP-OA, Column for Organic Acid Analysis

The following information will help you achieve optimal column performance.

➢ Eluents

Using an isocratic system, the typical mobile phase would be dilute sulfuric acid or dilute phosphoric acid. Other dilute acids (other than hydrochloric) may be used as long as they are compatible with the instrument. 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

Decreasing the eluent pH will protonate weak acids and increase retention relative to non-acids. While retention times of polar samples may be increased and non-polar interactions reduced with the addition of organic solvents, Benson Polymeric does not recommend its use. If your application calls for the addition of organic solvents, please contact the company for assistance.

➢ Temperature

For best overall separation of organic acids, 30°C is the recommended operating temperature. Retention times will change with higher temperatures for some organic acids. If the column is used for the separation of sugars or alcohols, a column temperature of 50°C or higher is used to shorten the analysis times. **ALWAYS**, pre-heat the column and stabilize the temperature prior to pumping mobile phase.

➢ Sample Preparation

Samples may contain precipitates or other contaminates such as metal compounds which bind with the resin. These contaminates 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): 1.0 at 25°C, 1.5 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. Columns should be pumped in reverse flow mode at 0.1mL/min., with 0.1M H_2SO_4 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

Part Number	Description	Dimensions
2000-2	BP-OA Guard	50 x 4.6 mm
2030-0	BP-OA	250 x 4.6 mm
2020-0	BP-OA	100 x 7.8 mm

3050-0	$50 Guard Column Re-packing Discount
3100-0	$100 Analytical Column Re-packing Discount

Other column formats available upon request.

Benson Polymeric Inc. PO Box 12812 Reno, NV 89510 USA
775-356-5755 Phone 775-356-6305 Fax www.bensonpolymeric.com