ULTRON ES-BSA-2

Instruction Manual

1. Introduction

Thank you for purchasing an ULTRON ES-BSA-2 column for High-performance liquid chromatography. The ULTRON ES-BSA-2 columns are enantiomer separation columns based on silica gel, about 7 μm in diameter, with a pore size of 300 Angstroms covalently bonded with Bovine Serum Albumin (BSA). The ULTRON ES-BSA-2 columns, which are manufactured under highly controlled conditions, must pass a series of strict tests before being accepted for shipment. To ensure optimal performance and durability of the column, please read these instructions carefully before using this column.

2. Specifications

Fittings	Waters compatible
pH	Recommended range: pH 5.0～7.5
Organic solvent concentration	Recommended range: 1~10% (Maximum: 20%)
Temperature	Recommended range: 5~25℃ (Maximum: 40℃)
Pressure	Recommended range: Up to 15 MPa (Maximum: 20 MPa)

※ The degradation of column performance is likely to occur when used at higher temperatures.

※ Avoid using a column repeatedly near the pressure limit or making abrupt changes in pressure to prevent shortening of the column life.

3. Shipment Solvent

Column is shipped with 50 mM sodium phosphate buffer (pH 6.9) containing 8% 1-propanol.

4. Mobile Phase and Sample

・Ensure to filter samples and mobile phases using a membrane filter with a mesh size of 0.45 μm or smaller before use. Failure to filter mobile phases, etc. can lead to blockages of column filters and increases in analytical pressures.

・Ensure to thoroughly degas mobile phases prior to use. Insufficient degassing of mobile phases can lead to the formation of bubbles inside analytical instruments and columns resulting in problems with analyses.

・As eluents, aqueous buffer systems in the pH range of 5.0 to 7.5 are recommended (e.g., phosphate or acetate buffers). Please consider a suitable buffer concentration depending on the combination of salt and organic solvent.

・It is recommended to dissolve the sample in a solvent that is of the same composition as a mobile phase.

・The pH of the sample solution must be set in acceptable pH range for packing material.

・Please flow the mobile phase at an initial flow rate 0.2 mL/min in order to avoid the danger of sudden pressure increases.

5. Precautions for Column Installation

・Before installation the column, replace the solvent in the system with the mobile phase to be used.
(Note: Ensure the compatibility of solvents/buffers when replacing to avoid precipitation of salts.)
Tubing must have flat ends and must bottom out in the column endfitting. Tubing must be connected to the column correctly to avoid creating a void between the column frit and tubing, which can cause a leak and result in poor column performance.

・Install the column according to the direction of the arrow.

・Do not remove the column from LC system before the pressure drops zero.

6. Cleaning and storage of columns

・Replace the buffer solution of the mobile phase with purified water, and then clean the column using a solution with an organic solvent concentration the same as the mobile phase.

Finally, replace the column with the same as the shipment solvent.

Close the column with end stop plugs tightly and store the column in the fridge, around 4℃ is recommended.

(allowable storage temperature is between 4℃ to 25℃).

・Performance of the column should be carried out in accordance with the enclosed “Performance Report”.

ULTRON series packed columns are shipped under highly controlled conditions. However, if you should find any defect, please contact your dealer or Shinwa.

Note that Shinwa does not warrant the product against column life or deterioration caused by the failure to follow the above instructions.

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