Operation Manual
Shodex OHpak SB-807 HQ

(Please read this manual carefully before using the column to keep its life and performance well.)

1. Introduction

Shodex OHpak SB-807 HQ is a gel filtration chromatography (GFC) column for water-soluble huge polymers. It is possible to measure a water-soluble huge polymer without partial exclusion even if its molecular weight distribution of polymer-side reaches several ten million or more.

2. Instructions in handling <Important>

Caution!

* Take notice of keeping instructions about the solvents and the reagents used with the column not to occur problems related to losing your health or leaking.

Attention!

* Use the column within the regular range of flow rate, pressure and temperature. There is a danger of deteriorating the column suddenly when it is handled beyond the permissible range even for a short time. See the clause "Usable conditions" about the permissible range.

3. Specifications

Column size	: 8.0 mm I.D. × 300 mm L.
Column material (inside)	: SUS 316
Packing material	: Poly(hydroxymethacrylate)-type porous particle
In-column solvent (initial)	: Ion exchanged water
Exclusion limit M.W.	: ca. 500,000,000 (Estimated value from the extrapolated calibration curve by standard pullulans.)
Number of theoretical plates	: ≧1,500 per column

4. Usable conditions

Flow rate : ≦1.5 ml/min
* 0.5~1.0ml/min is suitable usually.

Pressure : ≦0.5 MPa per column

Temperature : 4~60 ℃

pH : 3~10
* The eluent should be within the range of pH6~10 to avoid the corrosion of the device and the column when chloride ion is included.

Eluent : Aqueous solution of salt or buffer solution is usually used.
<Typical salt> Sodium chloride, sodium nitrate, sodium sulfate, potassium sulfate, ammonium sulfate.
<Typical buffer> Phosphate buffer, Tris-HCl buffer, acetate buffer, citrate buffer.
* Acetonitrile or methanol can be added within 30 vol% to suppress the adsorption of the hydrophobic sample.

Attention!

1) Do not remove the end fittings of the column under any circumstances.
2) Do not make a strong impact on the column: such as hitting or dropping on the floor.
3) Replace the solvent in the chromatograph with the eluent to be used before connecting the column.
4) Connect the column so that the flow direction corresponds to the arrow mark on the tag.
5) When the column is not used for a month or more, replace the in-column solvent with ion exchanged water, close each end with a stopper, and store it at room temperature.
6) Borate buffer is not desirable because there is a possibility of forming the complex with the hydrophilic surface of the packing material.
7) Confirm there is no cloudiness in the solution when the aqueous solution of salt is used added with acetonitrile or methanol.
8) Adjust the total concentration of the salts to 0.5M or less. In general, the range of 0.05~0.3M is suitable.
9) Install a guard column (SB-807G) upstream to protect the main column from deterioration.

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