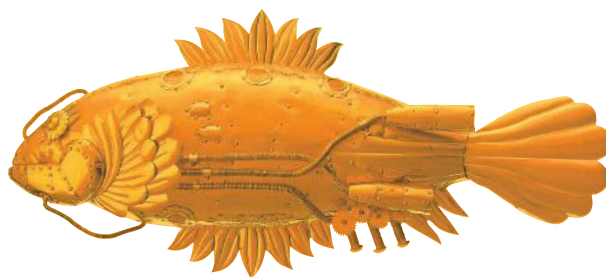


# Shodex™



## HPLC Columns

### MANUAL

### OHpak SB-807

**SHOWA**  
**DENKO**  
EUROPE

Columns manufactured by Showa Denko K.K Japan  
Made in Japan

**Shodex HPLC Columns**  
Europe, Middle East, Africa, Russia

For technical support please use  
contact details shown below:

**SHOWA DENKO EUROPE GmbH**  
Shodex Business  
Konrad-Zuse-Platz 3  
81829 Munich, Germany

E-mail: [support@shodex.de](mailto:support@shodex.de)  
Phone: +49 (0)89 93 99 62 37  
[www.shodex.de](http://www.shodex.de)



# Operation Manual

## Shodex™ OHpak™ SB-807 HQ

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

### 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. x 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)
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 °C.

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.

## 5. Warranty

1) Showa Denko K. K. warrants that the Shodex Column, at the time of delivery to the user, will conform to the specification of the attached Certificate of Analysis, if the Shodex Column is used in accordance with the operating manual. The foregoing warranty is exclusive and is in lieu of all other warranties with respect to the Shodex Column, whether written, oral, implied, statutory or otherwise. No warranties by Showa Denko K. K. are implied or otherwise created, including, but not limited to, the warranty of merchantability and fitness for particular purposes.

2) Any claim of inconformity to the specification must be notified to Showa Denko K.K. within ten (10) days after delivery to the user. User's exclusive remedy and Showa Denko K.K.'s exclusive liability for such claim are limited to the replacement of the Shodex Column in question. In no event is Showa Denko K.K. liable for any indirect, incidental or consequential damage arising out of in connection with the Shodex Instrument, whether or not such damage is allegedly based on breach of warranty, negligence or otherwise.

3) No warranty is made in any of the following cases:

(1) If the Shodex Column is not used in accordance with the operating manual.

(2) If the Shodex Column is remodeled by anyone other than person or firm designated by Showa Denko K.K.

(3) If the Shodex Column is resold by the user without giving prior written notice to Showa Denko K.K.

(4) If the performance of the Shodex Column is not conform to the specification of the attached Certificate of Analysis due to any of the reasons below:

a) Computer virus

b) Impurities contained in the sample, reagent, gas air or cooling water provided by the user

c) Breakdown or malfunction of equipment, apparatus or component used in combination with the Shodex Column

d) Force majeure such as fire, earthquake, flood, other natural disaster, rime, riot, act of terrorism, war or radioactive contamination

4) In no event is Showa Denko K.K. liable for (i) the results of analyses or preparations using the Shodex Column or any portion of the same, including, but not limited to, the reliability,

accuracy, efficacy and safety of said results, and (ii) the occupational hazard in the use of the Shodex Column, whether or not such use is made in accordance with the attached Conditions for use.

5) The Shodex instrument is for laboratory use only. It must not be used for clinical diagnosis. Showa Denko K.K. is not liable for any use of the Shodex Instrument except laboratory use.