TSK-GEL H_{HR}-HT Products

Part Numbers: 18393, GMH_{HR}-H(S) HT 7.8mm ID x 30cm, 13μm
18397,GMH_{HR}-H(S) HT Guardcolumn 7.5mmID x 7.5cm, 30μm

This sheet contains the recommended operating conditions and the specifications for TSK-GEL GMH_{HR}-HT columns. GMH_{HR}-HT columns are mixed-bed columns. They are prepared by combining packings of various pore sizes to obtain a column that has a linear calibration curve that spans a very wide molecular weight range. The HT columns are used exclusively for high temperature Gel Permeation Chromotography with o-dichlorobenzene as the mobile phase. Installation instructions and column care information are described in a separate Instruction Manual.

A. OPERATING CONDITIONS

1. Shipping Solvent: o-dichlorobenzene (ODCB)
2. Max./ Standard Flow: 2.5mL/min/0.5 - 1.0 mL/min
3. Max. Pressure: 20 kg/cm^2 = 300 psi
4. Multiple Columms: Columns of the same or different pore size are often connected in series to improve resolution and/or to expand the linear portion of the calibration curve. Connect the columns in order of decreasing pore size to avoid overloading from the high MW components. Connect analytical columns using short pieces of 1/16" x 0.01" ID stainless steel tubing.
5. Solvents: HT columns are only available packed in o-dichlorobenzene (ODCB), although other H-type columns are available packed in ODCB.
6. Temperature: HT columns can be operated up to 140°C. There is limited evidence that HT columns may be operated at temperatures as high as 220C in 1-chloronaphthalene.
7. Sample Size: 0.001 - 0.5mg (analytical)
8. Storage: The column can be left overnight in solvent in the LC system. When it will not be used for longer periods of time, remove the column from the equipment, seal the ends with the provided protective screws, and store it at laboratory temperature. At all times, prevent air from entering the column!
9. Column Protection: The use of guard columns is recommended to prolong the life of the analytical column. Guard columns are not suited for analysis. Their main function is to protect the analytical column; they do not improve resolution when connected to the main column. They are also not a substitute for filtering the mobile phase and the sample. A guard column does reduce pump pulsation, and further protects the main column by collecting highly adsorptive components and insoluble substances. Guard column life depends greatly on sample cleanliness. As a general rule, guard columns should be replaced when the peaks become excessively wide, or when the peaks show splitting.

B. SPECIFICATIONS

The performance of TSK-GEL HT columns are tested under the conditions described in the Data Sheet. All columns have passed the following quality control specifications:

1. Number of Theoretical Plates (N): > 8,000

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