

# TSK-GEL® Octadecyl-2PW Products

<b>Analytical/Semi-Prep:</b>	18754, 2.0mm ID x 15cm, 5µm	
	17500, 4.6mm ID x 15cm, 5µm	17502, Guard Column for P/N 17500, 4.6mm ID x 1.0cm, 5µm
	17501, 6.0mm ID x 15cm, 5µm	17503, Guard Column for P/N 17501, 6.0mm ID x 1.0cm, 5µm
		14594, Pre-injector membrane filter holder, SS
		03409, 13mm Nylon Membrane filter, 0.45µm, for PN 14594

This sheet contains the recommended operating conditions and the specifications for TSK-GEL OD-2PW columns and guard columns. Installation instructions and column care information are described in a separate Instruction Manual.

## A. OPERATING CONDITIONS

- Shipping Solvent: 55% Acetonitrile - 45% Water
- Max. Flow Rate: 0.14 mL/min (2.0mm ID x 15cm)  
1.2 mL/min (4.6mm ID x 15cm)  
1.5 mL/min (6.0mm ID x 15cm)

When a buffer with high viscosity is used, the maximum flow rate may have to be reduced so as not to exceed the maximum pressure drop. When changing solvents, use 50% of the maximum flow rate (20% for prep columns).

- Standard Flow Rate: 0.07 - 0.11 mL/min (2.0mm ID x 15cm)  
0.4 - 0.6 mL/min (4.6mm ID x 15cm)  
0.5 - 1.0 mL/min (6.0mm ID x 15cm)
- Max. Pressure: 7.0 MPa (2.0mm ID x 15cm)  
10.0 MPa (4.6mm ID x 15cm, 6.0mm ID x 15cm)
- pH Range: 2 - 12 (pH above 12 can only be used for a short time for cleaning)
- Organic Conc.: 0 - 100%
- Temperature: 5 - 50°C during normal operation  
15 - 30°C recommended for storage
- Cleaning Solvents: (1) Acetonitrile or Methanol, or  
(2) 0.1 - 0.2mol/L NaOH,  
(3) 0.1 - 0.2mol/L NaOH with added organic modifier  
(4) 20 - 40% acetic acid aq.

**NOTE:** Clean the column regularly with any of the above solvents. Solvents should be injected into the column in 250 µl increments for a total of 0.2 - 1.0 ml of cleaning solvent (2) and (3). Long term exposure in (2) or (3) is not recommended. Use proportionally larger volumes for (semi-) prep columns.

- Storage: Store the column in the shipping solvent when it will not be used the next day. For overnight storage flush the column with the mobile phase at 10 - 20% of the maximum flow rate. Prevent air from entering the column!
- Column Protection: The use of guard columns is recommended to prolong the life of the analytical column. 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. Use an in-line filter (0.2 - 0.5µm) between the pump and injector.

## B. SPECIFICATIONS

The performance of TSK-GEL OD-2PW columns is tested under the conditions described in the Data Sheet. All columns have passed the following quality control specifications:

- Number of Theoretical Plates (N): ≥ 5,000 (2.0mmID)  
≥ 6,000 (4.6mm & 6mm ID)