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OPERATING CONDITIONS and SPECIFICATIONS

TSK-GEL® OD-2PW Products

Part Numbers:	18754	2.0 mm ID x 15.0 cm L	5 µm	
	17500	4.6 mm ID x 15.0 cm L	5 µm	
	17501	6.0 mm ID x 15.0 cm L	5 µm	
	17502	4.6 mm ID x 1.0 cm L	Guard Column for P/N 17500	5 µm
	17503	6.0 mm ID x 1.0 cm L	Guard Column for P/N 17501	5 µm

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	2.0 mm ID x 15.0 cm L
1.20 ml/min	4.6 mm ID x 15.0 cm L
1.50 ml/min	6.0 mm ID x 15.0 cm L

NOTE: 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 a flow rate equal to 50% of the maximum flow rate (20% for prep columns).

- Standard Flow Rate:

0.07 - 0.11 ml/min	2.0 mm ID x 15.0 cm L
0.40 - 0.60 ml/min	4.6 mm ID x 15.0 cm L
0.50 - 1.00 ml/min	6.0 mm ID x 15.0 cm L
- Max. Pressure:

70 kg/cm ²	=	psi	2.0 mm ID x 15.0 cm L
100 kg/cm ²	=	psi	4.6 mm ID x 15.0 cm L and 6.0 mm ID x 15.0 cm L
- pH Range: 2 - 12 pH above 12 can only be used for a short time for cleaning
- Organic Conc.: 0 - 100%
- Temperature:

4 - 50 °C	during normal operation
15 - 30 °C	recommended for storage
- Cleaning Solvents:
 - (1) Acetonitrile or Methanol, or
 - (2) 0.1 - 0.2 M NaOH,
 - (3) 0.1 - 0.2 N 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 - 0.5 µm) 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):	\geq	5,000	2.0 mm ID
	\geq	6,000	4.6 mm ID and 6.0 mm ID
Asymmetry Factor (AF):		0.70 - 1.60	