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## OPERATING CONDITIONS and SPECIFICATIONS

### TSK-GEL® ODS-80TM Products

<b>Part Numbers:</b>	16651	4.6 mm ID x 7.5 cm L	5 µm
	08148	4.6 mm ID x 15.0 cm L	5 µm
	08149	4.6 mm ID x 25.0 cm L	5 µm
	14001	7.8 mm ID x 30.0 cm L	10 µm
	14002	21.5 mm ID x 30.0 cm L	10 µm
	18206	Guard Filter Holder	
	18207	Guard Filter (pk3)	
	14098	21.5 mm ID x 7.5 cm L	Guard Column

This sheet contains the recommended operating conditions and the specifications for TSK-GEL ODS-80 TM columns and guard columns. Installation instructions and column care information are described in a separate Instruction Manual.

#### A. OPERATING CONDITIONS

1. Shipping Solvent: 70% Methanol - 30% Water
2. Max.Flow Rate:
 

1.2 ml/min	4.6 mm ID
3.0 ml/min	7.8 mm ID
12.0 ml/min	21.5 mm ID

**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 25% of the maximum flow rate.

3. Standard Flow Rate:
 

0.8 - 1.0 ml/min	4.6 mm ID
1.0 - 2.0 ml/min	7.8 mm ID
4.0 - 6.0 ml/min	21.5 mm ID
4. Max. Pressure:
 

100 kg/cm <sup>2</sup> = 1500 psi	7.5 cm L column
200 kg/cm <sup>2</sup> = 2900 psi	15.0 cm L column
300 kg/cm <sup>2</sup> = 4500 psi	25.0 cm L column
80 kg/cm <sup>2</sup> = 1200 psi	7.8 mm ID
60 kg/cm <sup>2</sup> = 900 psi	21.5 mm ID
5. pH Range: 2.0 - 7.5
7. Organic Conc.: 0 - 100%
8. Temperature: 0 - 45°C Reduce flow rate when operating below 10°C
9. Cleaning Solvents:
  - (1) Acetonitrile or Methanol, or
  - (2) gradient from 10% to 100% acetonitrile in 0.05% trifluoroacetic acid
10. Storage: Store the column in acetonitrile or methanol when it will not be used the next day. For overnight storage flush the column with the mobile phase at 0.2 ml/min.
11. 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 after every 30 - 40 sample injections or when the peaks become excessively wide or when the peaks show splitting.

## B. SPECIFICATIONS

The performance of TSK-GEL ODS-80 TM 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):	≥ 4,500	7.5 cm L column
	≥ 11,000	15.0 cm L column
	≥ 18,000	25.0 cm L column
	≥ 6,000	7.8 mm ID, 21.5 mm ID and 55.0 mm ID x 60.0 cm L
	≥ 3,000	55.0 mm ID x 30.0 cm L
Asymmetry Factor (AF):	0.7 - 1.8	4.6 mm ID and 6.0 mm ID
	0.7 - 1.9	7.8 mm ID and 21.5 mm ID