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OPERATING CONDITIONS and SPECIFICATIONS

TSKgel® ODS-80Ts Products

Part Numbers:	0018150	2.0 mm ID x 15.0 cm L	5 µm	
	0018151	2.0 mm ID x 25.0 cm L	5 µm	
	0017200	4.6 mm ID x 7.5 cm L	5 µm	
	0017201	4.6 mm ID x 15.0 cm L	5 µm	
	0017202	4.6 mm ID x 25.0 cm L	5 µm	
	0017380	21.5 mm ID x 30.0 cm L	10 µm	
	0019325	2.0 mm ID x 1.0 cm L	5 µm	Guard Cartridge for 2 mm ID columns
	0019308	2.0 mm ID x 1.0 cm L		Guard Cartridge Holder for P/N 19325,
	0019011	3.2 mm ID x 1.5 cm L	5 µm	Guard Cartridge for 4.6 mm ID columns
	0019018	3.2 mm ID x 1.5 cm L		Guard Cartridge Holder for P/N 19011
	0017385	21.5 mm ID x 7.5 cm L	10 µm	Guardcolumn

This sheet contains the recommended operating conditions and the specifications for **TSKgel** ODS-80Ts columns and Guardcolumns. 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:

0.22	mL/min	2.0 mm ID
1.20	mL/min	4.6 mm ID
12.00	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:

0.15 - 0.18	mL/min	2.0 mm ID
0.80 - 1.00	mL/min	4.6 mm ID
4.00 - 6.00	mL/min	21.5 mm ID
4. Max. Pressure:

10	MPa	4.6 mm ID x 7.5 cm L
20	MPa	4.6 mm ID x 15.0 cm L and 2.0 mm ID x 15.0 cm L
30	MPa	4.6 mm ID x 25.0 cm L and 2.0 mm ID x 25.0 cm L
6	MPa	21.5 mm ID x 30.0 cm L
5. pH Range: 2.0 - 7.5
6. Salt Conc.: No limitation
7. Organic Conc.: No limitation
8. Temperature: 10 - 50°C Reduce flow rate when operating below 10°C.
9. Cleaning Solvents:
 - (1) High conc. solvent containing organic modifiers*
 - (2) Mixture of organic acids and high conc. organic modifiers*

NOTE: *Acetonitrile and methanol are recommended as a modifiers

10. Storage: Store the column in the shipping solvent if it will not be used within three days. Prevent air from entering the column. For overnight storage flush the column with mobile phase at 0.2 mL/min (4.6 mm ID) or 0.05 mL/min (2.0 mm ID) respectively.
11. Column Protection: An on-line filter (0.2-0.5 µm) equipped between pump and injection valve is useful. Also Guard columns prevent the column from a contamination of strongly adsorbed solutes. As a general rule, Guard columns should be replaced after 30-40 sample injections or when peaks become excessively wide.

B. SPECIFICATIONS

The performance of **TSKgel** ODS-80T_s 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 columns
	≥	11,000	15.0 cm columns
	≥	18,000	25.0 cm columns
	≥	6,000	30.0 cm columns
Asymmetry Factor (AF):		0.7 - 1.8	4.6 mm ID and 21.5 mm ID
		0.8 - 1.6	2.0 mm ID