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OPERATING CONDITIONS and SPECIFICATIONS

TSKgel® Ether-5PW Products

0018760	2.0 mm ID x 7.5 cm L		10 µm
0008641	7.5 mm ID x 7.5 cm L		10 µm
0008643		Guardgel Kit for PN 08641	20 µm
0014013	5.0 mm ID x 5.0 cm L	Glass	10 µm
0014014	8.0 mm ID x 7.5 cm L	Glass	10 µm
0014025		Guardgel Kit Glass for 14013 & 14014	20 µm

This sheet contains the recommended operating conditions and the specifications for **TSKgel** Ether-5PW columns. Installation instructions and column care information are described in a separate Instruction Manual.

A. OPERATING CONDITIONS

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|----------------------|-------------|--|--|
| 1. Shipping Solvent: | Water | | |
| 2. Max.Flow Rate: | 0.12 mL/min | 2.0 mm ID x 7.5 cm L | |
| | 1.00 mL/min | 5.0 mm ID x 5.0 cm L, Glass | |
| | 1.20 mL/min | 7.5 mm ID x 7.5 cm L and 8.0 mm ID x 7.5 cm L, Glass | |

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.

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| 3. Standard Flow Rate: | 0.05 - 0.10 mL/min | 2.0 mm ID x 7.5 cm L | |
| | 0.50 - 0.80 mL/min | 5.0 mm ID x 5.0 cm L, Glass | |
| | 0.50 - 1.00 mL/min | 7.5 mm ID x 7.5 cm L and 8.0 mm ID x 7.5 cm L, Glass | |
| 4. Max. Pressure: | 0.6 MPa | 2.0 mm ID x 7.5 cm L | |
| | 2.0 MPa | other columns | |
| 5. pH Range: | 2.0 - 12.0 | | |
| 6. Salt Conc.: | ≤ 4 Molar | | |
| 7. Organic Conc.: | ≤ 50% | | |
| 8. Temperature: | 10 - 50°C | Reduce flow rate when operating below 10°C. | |
| 9. Cleaning Solvents: | (1) 0.1 - 0.2 M NaOH, and, if not successful, | | |
| | (2) 20 - 40% acetic acid aq. | | |

NOTE: Clean the column regularly by injecting up to one column volume 0.1 - 0.2 M NaOH in 250 µl increments. Use proportionately larger volumes for (semi-) prep columns.

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| 10. Storage: | Store the column in DI water when it will not be used the next day or 20% ethanol or methanol for longer term storage. Rinse the column with DI water to remove salt before switching to organic to prevent salt precipitation. For overnight storage flush the column with the low salt concentration mobile phase at 10 - 20% of the max. flow rate. Prevent air from entering the column! | | |
| 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 when the peaks become excessively wide, or when the peaks show splitting. | | |

B. SPECIFICATIONS

The performance of **TSKgel** Ether-5PW 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):	≥	600	5.0 mm ID x 5.0 cm L, Glass
	≥	3,000	2.0 mm ID, 7.5 mm ID, and 8.0 mm ID Glass
Asymmetry Factor (AF):		0.8 - 1.8	2.0 mm ID x 15.0 cm L
		1.0 - 2.0	other columns;