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OPERATING CONDITIONS and SPECIFICATIONS

TSKgel® G2000SW Products

Part Numbers:	0005788	7.5 mm ID x 30.0 cm L	10 µm
	0005102	7.5 mm ID x 60.0 cm L	10 µm
	0006727	21.5 mm ID x 30.0 cm L	13 µm
	0005146	21.5 mm ID x 60.0 cm L	13 µm

This sheet contains the recommended operating conditions and the specifications for TSKgel G2000SW columns. Installation instructions and column care information are described in a separate Instruction Manual.

A. OPERATING CONDITIONS

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| 1. Shipping solvent | 0.05% | NaN ₃ and 0.1 M Na ₂ SO ₄ in 0.1 M phosphate buffer, pH 6.7 |
| 2. Max. Flow Rate: | 1.2 mL/min | 7.5 mm ID |
| | 8.0 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.

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| 3. Standard Flow Rate: | 0.5 - 1.0 mL/min | 7.5 mm ID |
| | 3.0 - 6.0 mL/min | 21.5 mm ID |
| 4. Max. Pressure: | 1.0 MPa | 21.5 mm ID x 30.0 cm L |
| | 2.0 MPa | 7.5 mm ID x 30.0 cm L, 21.5 mm x 60.0 cm L, |
| | 4.0 MPa | 7.5 mm ID x 60.0 cm L |

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| 5. pH Range: | 2.5 - 7.5 |
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| 6. Salt Conc.: | < 0.5 mol/L |
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| 7. Organic Conc.: | 0 - 100% | for aqueous soluble organic solvents. Make gradual solvent changes using a shallow gradient at low flow rate. |
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| 8. Temperature: | 10 - 30°C | Reduce flow rate when operating below 10°C. |
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| 9. Cleaning Solvents: | (1) conc. salt solution at low pH, e.g. 0.5 M Na ₂ SO ₄ ; pH 2.7
(2) methanol or acetonitrile in low conc. aqueous buffer
(3) buffered solution of urea or guanidine (only if (1) and (2) failed before) |
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NOTE:

Choose a cleaning solvent based on sample properties, e.g. use (1) to remove basic proteins, and (2) to remove hydrophobic proteins. Chaotropic agents can solvate strongly adsorbed proteins, e.g. via hydrogen bonding.

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| 10. Storage: | Store the column in mobile phase containing 0.05% NaN ₃ or 20% ethanol when it will not be used the next day.
For overnight storage flush the column with mobile phase at low flow rate. Prevent air from entering the column! |
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| 11. Column Protection: | The use of guard columns (TSKgel SW Guard Column P/N 05371 for 7,5 mm ID, P/N 05758 for 21.5 mm ID) 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, when the peaks become excessively wide, or when the peaks show splitting. |
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| 12. Top-Off: | Occasionally, due to accident, sample, mobile phase or operational variables, a depression can develop at the column or guard column inlet.
Use SW Top-Off (P/N 06819) for filling in such voids. |
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B. SPECIFICATIONS

The performance of TSKgel G2000SW 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):	≥ 10,000	30.0 cm L columns
	≥ 20,000	60.0 cm L columns

Asymmetry Factor (AF):	0.7 - 1.6
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