

TSK-GEL® SuperSW3000 Products

Part Numbers:	21845, 1mm ID X 30cm, 4 µm	18675, 4.6mm ID x 30cm, 4µm
	21485, 2.0mm ID x 30cm, 4µm	18762, Guard column, 4.6mm ID x 3.5cm

This sheet contains the recommended operating conditions and the specifications for TSK-GEL SuperSW3000 columns. Installation instructions and column care information are described in a separate Instruction Manual.

A. OPERATING CONDITIONS

- Shipping Solvent: 0.05% NaN₃ and 0.1M Na₂SO₄ in 0.1M phosphate buffer, pH 6.7
- Max. Flow Rate: 0.02 mL/min (1mm ID)
0.075 mL/min (2mm ID)
0.4 mL/min (4.6mm ID)

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.
- Standard Flow Rate: 0.016mL/min (1mm ID)
0.065mL/min (2mm ID)
0.1 – 0.35 mL/min (4.6mm ID)
- Max. Pressure: 12Mpa = 120 kg/cm² = 1800 psi
- pH Range: 2.5 - 7.5
- Salt Conc.: ≤ 0.5 Molar
- Organic Conc.: 0 - 100% for aqueous soluble organic solvents. Make gradual solvent changes using a shallow gradient at low flow rate.
- Temperature: 10 - 30°C. Reduce flow rate when operating below 10°C.
- Cleaning Solvents: (1) conc. salt solution at low pH, e.g. 0.5M Na₂SO₄, pH 2.7
(2) methanol or acetonitrile in low conc. aqueous buffer
(3) buffered solution of SDS, urea or guanidine

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.
- Storage: Store the column in mobile phase containing 0.05% NaN₃ 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!
- 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, when the peaks become excessively wide, or when the peaks show splitting.

B. SPECIFICATIONS

The performance of TSK-GEL Super SW3000 columns is tested under the conditions described in the Data Sheet. All columns have passed the following quality control specifications:

- Min. Number of Theoretical Plates (N): 18,000 (1mm ID)
25,000 (2mm ID)
30,000 (4.6mm ID)
- Asymmetry Factor (AF): 0.7 - 1.6

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