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OPERATING CONDITIONS and SPECIFICATIONS

TSK-GEL® SUPERSW3000 Products

Part Numbers:	18675	4.6 mm ID x 30.0 cm L	4 µm
	21485	2.0 mm ID x 30.0 cm L	4 µm
	21845	1.0 mm ID x 30.0 cm L	4 µm

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 0.1 M Na₂SO₄ in 0.1 M phosphate buffer, pH 6.7
- Max. Flow Rate:

0.4 ml/min	4.6 mm ID
75.0 µl/min	2.0 mm ID
20.0 µl/min	1.0 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.

- Standard Flow Rate:

0.1 - 0.35 ml/min	4.6 mm ID
65.0 µl/min	2.0 mm ID
16.0 µl/min	1.0 mm ID
- Max. Pressure: 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. 0.5 M Na₂SO₄, pH 2.7
 - (2) methanol or acetonitrile in low conc. aqueous buffer, or, if nothing else is successful,
 - (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 a guard column (Super SW Guard column P/N 18762) 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 SuperSW3000 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):	≥	30,000	4.6 mm ID
	≥	25,000	2.0 mm ID
	≥	25,000	1.0 mm ID
Asymmetry Factor (AF):		0.7 - 1.6	