

Preparative TSK-GEL® G3000SW Columns

07481, 55mm ID x 30cm, 15-25µm
 07482, 55mm ID x 60cm, 15-25µm
 07483, 108mm ID x 30cm, 15-25µm

07427, Guardcolumn SW, 45mm ID x 5cm

This sheet contains the recommended operating conditions and the specifications for TSK-GEL G3000SW columns and guard columns. Installation instructions and column care information are described in a separate Instruction Manual.

A. OPERATING CONDITIONS

1. Shipping Solvent: 0.05% NaN₃ aq. solution
2. Max. Flow Rate: 50 mL/min (55mm ID)
150 mL/min (108mm ID)

When changing solvents, use a flow rate equal to 1/3d of the maximum flow rate.
3. Standard Flow Rate: 15 - 25 mL/min (55mm ID)
50 - 100 mL/min (108mm ID)
4. Max. Pressure: 10 kg/cm² = 150 psi (30cm x 55mm, 108mm ID x 30cm)
15 kg/cm² = 225 psi (55mm ID x 60cm)
5. pH Range: 2.5 - 7.5
6. Salt Conc.: <0.5 Molar
7. Organic Conc.: 0 - 100% for aqueous soluble organic solvents. To replace a buffer/salt mobile phase with organic solvent, first displace it with water, then make gradual solvent changes using a shallow gradient at low flow rate.
8. Temperature: 10 - 30°C. Reduce flow rate when operating below 10°C.
9. Cleaning Solvents: (1) conc. salt solution
(2) low pH solution, e.g. phosphate at pH 2.5
(3) methanol or acetonitrile in low conc. aqueous buffer
(4) buffered solution of urea or guanidine

NOTE: Choose a cleaning solvent based on sample properties, e.g. use (1) to reduce adsorption based on ionic interaction, (2) to remove basic proteins, (3) to eliminate hydrophobic interaction, and (4) to solvate proteins that are adsorbed via hydrogen bonding.

10. Storage: When the column will be used again within three days, it can be stored in mobile phase after sealing both ends with plugs. For longer storage, flush the column with a buffer solution containing 0.05% NaN₃. Always remove halides before column storage to prevent corrosion.
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 TSK-GEL G3000SW columns is tested under the conditions described in the Data Sheet. All columns have passed the following quality control specification:

1. Number of Theoretical Plates (N): ≥4,000 (30cm x 55mm & 108mm ID x 30cm)
≥9,000 (55mm ID x 60cm)