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OPERATING CONDITIONS and SPECIFICATIONS

TSK-GEL® Super Q-5PW Products

| | | | | | | | |
|----------------------------|----------------|------------------------|-------------------------------------|-------|-------|--------------|----------------------------|
| Part Numbers: | 18257 | 7.5 mm ID x 7.5 cm L | 10 µm | Steel | 18388 | Guardgel Kit | For 7.5 mm ID x 7.5 cm L |
| | 18386 | 7.5 mm ID x 8.0 cm L | 10 µm | Glass | 18389 | Guardgel Kit | Glass |
| | 18387 | 21.5 mm ID x 15.0 cm L | 13 µm | Steel | 18390 | Guardgel Kit | For 21.5 mm ID x 15.0 cm L |
| Small Ion Capacity: | > 0.1 meq / ml | | Counter Ion: Cl ⁻ | | | | |

This sheet contains the recommended operating conditions and the specifications for TSK-GEL Super Q-5PW columns. Installation instructions and column care information are described in a separate Instruction Manual.

A. OPERATING CONDITIONS

1. Shipping Solvent: Distilled and Deionized Water
 2. Max.Flow Rate: 1.2 ml/min
8.0 ml/min
- NOTE:**
- a. When changing solvents, use a flow rate equal to 50% of the maximum flow rate.
 - b. 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.
3. Standard Flow Rate: 0.5 – 1.0 ml/min
4.0 – 6.0 ml/min
 4. Max. Pressure: 20 kg / cm² = 300 psi 7.5 mm ID x 7.5 cm L
20 kg / cm² = 300 psi 21.5 mm ID x 15.0 cm L
 5. pH Range: 2.0 - 12.0
 6. Salt Conc.: ≤ 0.5 Molar
 7. Organic Conc.: ≤ 20 %
 8. Temperature: ≤ 45° 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., or
(3) Aqueous buffer in 30% acetonitrile or methanol, or, if nothing else is successful,
(4) Urea or non ionic surfactant in buffer.
- NOTE:** Clean the column regularly by injecting up to one column volume 0.1 - 0.2 M NaOH in 250µl increments.
10. Storage: Store the column in DI water when it will not be used the next day. For overnight storage flush the column with the low salt concentration mobile phase at 10 - 20% of the maximum flow rate. Prevent air from entering the column!

B. SPECIFICATIONS

The performance of TSK-GEL Super Q-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): | ≥ 1,300 | 7,5 mm ID x 7.5 cm L | 10 µm |
| | ≥ 3,000 | 21.5 mm ID x 15.0 cm L | 13 µm |
| Asymmetry Factor (AF): | 0.8 - 1.6 | 7,5 mm ID x 7.5 cm L | 10 µm |

Please note, that there are no asymmetry specifications for the 21.5 mm ID columns available.