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OPERATING CONDITIONS and SPECIFICATIONS

TSKgel® CM-5PW Products

Analytical/Semi-Prep:	0013068	7.5 mm ID x 7.5 cm L		10 µm
	0013069		Guardgel Kit	
	0014012	20.0 mm ID x 15.0 cm L	Glass	13 µm

Small Ion Capacity: > 0.1 meq/mL **Counter Ion:** Na⁺

This sheet contains the recommended operating conditions and the specifications for **TSKgel** CM-5PW columns and guard 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	7.5 mm ID x 7.5 cm L
8.0 mL/min	20.0 mm ID x 15.0 cm L Glass

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.

3. Standard Flow Rate:

0.5 - 1.0 mL/min	7.5 mm ID x 7.5 cm L
4.0 - 6.0 mL/min	20.0 mm ID x 15.0 cm L Glass
4. Max. Pressure: 1.5 MPa 7.5 mm ID and 20.0 mm ID Glass
5. pH Range: 2.0 - 12.0
6. Salt Conc.: ≤ 0.5 Molar
7. Organic Conc.: ≤ 20%
8. Temperature: ≤ 30°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 organic solvent, or if nothing else was successful,
 - (4) Urea or nonionic surfactant in buffer.

NOTE: Clean the column regularly by injecting up to one column volume of 0.1 - 0.2 N NaOH in 250µl increments. Use proportionally larger volumes for (semi-) prep columns.

10. Storage: Store the column in DI water when it will not be used the next day or 20% ethanol or methanol in DI water for longer term storage. For overnight storage flush the column with the low salt concentration mobile phase at low flow rate. Prevent air from entering the column!
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 **TSKgel** CM-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
	≥ 2,500	20.0 mm ID Glass
Asymmetry Factor (AF):	0.8 - 1.6	

Note our technical hotline tel +49 6155 70437-36 and e-mail, techsupport.tbg@tosoh.com