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OPERATING CONDITIONS and SPECIFICATIONS

TSKgel® Chelate-5PW Products

Part Numbers:	0008645	7.5 mm ID x 7.5 cm L		10 µm
	0014440	5.0 mm ID x 5.0 cm L	Glass	10 µm
	0008647		Guardgel Kit	

This sheet contains the recommended operating conditions and the specifications for **TSKgel** Chelate-5PW columns. Installation instructions and column care information are described in a separate Instruction Manual.

A. OPERATING CONDITIONS

1. Shipping Solvent: 10 mM Sodium Acetate (pH 4.5) buffer
NOTE: Wash the column with water before loading the column with metal ion.
2. Max.Flow Rate: 1.0 mL/min 5.0 mm ID x 5.0 cm L Glass
 1.2 mL/min 7.5 cm 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.
3. Standard Flow Rate: 0.5 - 0.8 mL/min 7.5 mm ID x 7.5 cm L
 0.5 - 1.0 mL/min 5.0 mm ID x 5.0 cm L Glass
4. Max. Pressure: 1 MPa 5.0 mm ID
 2 MPa 7.5 mm ID
5. pH Range: 2 - 12 pH above 12 can only be used for a short time
6. Salt Conc.: ≤ 3 Molar
7. Organic Conc.: ≤ 20%.
8. Temperature: ≤ 45°C
9. Cleaning Solvents: (1) 0.1-0.2 M NaOH, or
 (2) 20-40% acetic acid aq.
 (3) Aqueous buffer in organic solvent, or, if nothing else was successful,
 (4) Urea or non-ionic surfactant in buffer
NOTE: Clean the column regularly by injecting up to one column volume 0.1 M NaOH in 250 - 500µl increments.
10. Storage: Store the column in a neutral pH buffer containing 0.02% NaN₃ at a temperature between 4° C and 10°C when it will not be used the next day. For overnight storage flush the column with the mobile phase at 0.2 ml/min. Prevent air from entering the column!
11. Regeneration: Remove the metal ion using an aqueous solution of 50 mM EDTA in 0.5 M NaCl before reloading the column with metal ion.
12. Column Protection: Guard columns prolong the life of the analytical column. Guard column life depends greatly on sample cleanliness. As a general rule, guard columns are replaced after 30-40 sample injections, when the peaks become excessively wide, or when the peaks show splitting.

B. SPECIFICATIONS

The performance of **TSKgel** Chelate-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
	≥ 500	5.0 mm ID x 5.0 cm L Glass
Asymmetry Factor (AF):	0.7 - 1.6	5.0 mm ID x 5.0 cm L Glass
	0.8 - 1.6	other columns

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