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OPERATING CONDITIONS and SPECIFICATIONS

TSK-GEL® G5000PW$_{XL}$ Products

Part Numbers:	08023	7.8 mm ID x 30.0 cm L		**10 µm**
	08035	TSKgel Top-Off PW$_{XL}$,	1g wet resin	**10 µm**

This sheet contains the recommended operating conditions and the specifications for TSK-GEL G5000PW$_{XL}$ columns. Installation instructions and column care information are described in a separate Instruction Manual.

A. OPERATING CONDITIONS

1.	Shipping Solvent:	Water	
2.	Max.Flow Rate:	1.0	ml/min
	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:	0.3 - 0.6	ml/min
4.	Max. Pressure:	20 kg/cm^2	= 300 psi
5.	pH Range:	2.0 - 12.0	
6.	Salt Conc.:	≤ 0.5 Molar	
7.	Organic Conc.:	≤ 20%	It is possible to use up to 50% organic when the solvent change is made very gradually using a shallow gradient at low flow rate.
8.	Temperature:	10 - 80°C	Reduce flow rate when operating below 10°C.
9.	Cleaning Solvents:		(1) High salt concentration buffer (0.5 - 1.0 M), or (2) pH 2 - 3 or pH 9 - 12 buffer, or (3) Buffer with acetonitrile or methanol, or if not successfull (4) Buffer with urea or SDS
	NOTE:		Choose a cleaning solvent based on sample properties, e.g. use (1) to remove basic polymers, (3) to remove hydrophobic proteins etc.
10.	Storage:		Store the column in a 0.05% NaN_3 solution or 20% ethanol in DI water when it will not be used the next day. For overnight storage flush the column at low flow rate with the mobile phase. 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 after every 30-40 sample injections, when the peaks become excessively wide, or when the peaks show splitting.
12.	TSKgel Top-Off:		Occasionally, due to accident, sample, mobile phase or operational variables, a depression can develop at the column or guard column inlet. Use TSKtop-off gel PW$_{XL}$ for filling in such voids.

B. SPECIFICATIONS

The performance of TSK-GEL G5000PW$_{XL}$ 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):	≥ 10,000
Asymmetry Factor (AF):	0.7 - 1.6

Note our technical hotline tel 01805-012299
and e-mail, techsupport.sep@tosoh.com

DS1025 / Oct 08 / VN

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