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OPERATING CONDITIONS and SPECIFICATIONS

TSKgel ® PW Guardcolumn Products

Part Numbers:	0006763	7.5 mm ID x 7.5 cm L	Guardcolumn PWL	**13 µm**
	0006762	7.5 mm ID x 7.5 cm L	Guardcolumn PWH	**13 µm**
	0006758	7.5 mm ID x 21.5 cm L	Guardcolumn PWH	**17 µm**

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

A. OPERATING CONDITIONS

1.	Shipping Solvent:	Water		
2.	Max.Flow Rate:	1.2	mL/min	7.5 mm 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 - 1.0	mL/min	7.5 mm ID
4.	Max. Pressure:	4	MPa	7.5 mm ID
5.	pH Range:	2.0 - 12.0		
6.	Salt Conc.:	≤ 0.5 M		
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 nothing else is successful, (4) Buffer with urea or SDS	
	NOTE:		Choose a cleaning solvent based on sample properties, e.g. use (1) to remove basic polymers, and (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.	

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DS 1140 / Aug 15/ AX