

# TSK-GEL<sup>®</sup> Ether-5PW Products

<b>Part Numbers:</b>	18760, 2.0mm ID x 7.5cm, 10 $\mu$ m 08641, 7.5mm ID x 7.5cm, 10 $\mu$ m 14013, 5.0mm ID Glass x 5.0cm, 10 $\mu$ m 14014, 8.0mm ID Glass x 7.5cm, 10 $\mu$ m	42156, Guard Cartridge for 2mm ID column, 2mm ID x 1cm 19308, Guard Cartridge Holder for 2mm ID cartridges 08643, Guardgel Kit for P/N 08641 14025, Guardgel Kit, Glass, for P/N 14013 & 14014
----------------------	--	---

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

<b>A. OPERATING CONDITIONS</b>	
1. Shipping Solvent:	Water
2. Max. Flow Rate:	0.12mL/min (2.0mm ID x 7.5cm) 1.0mL/min (5.0mm ID Glass x 5.0cm) 1.2mL/min (7.5mm ID x 7.5cm and 8.0mm ID Glass x 7.5cm)  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 50% of the maximum flow rate.
3. Standard Flow Rate:	0.05-0.10mL/min (2.0mm ID x 7.5cm) 0.5 - 0.8mL/min (5.0mm ID Glass x 5.0cm) 0.5 - 1.0mL/min (7.5mm ID x 7.5cm and 8.0mm ID Glass x 7.5cm)
4. Max. Pressure:	0.6MPa (2.0mm ID x 7.5cm) 2MPa (other columns)
5. pH Range:	2.0 - 12.0
6. Salt Conc.:	$\leq$ 4 Molar
7. Organic Conc.:	$\leq$ 50%
8. Temperature:	10 - 50°C - Reduce flow rate when operating below 10°C.
9. Cleaning Solvents:	(1) 0.1 - 0.2M NaOH. If not successful, (2) 20 - 40% acetic acid aqueous  <b>NOTE:</b> Clean the column regularly by injecting up to one column volume 0.1 - 0.2M NaOH in 250 $\mu$ L increments.
10. Storage:	Store the column in DI water when it will not be used the next day or 20% ethanol or methanol for longer term storage. Rinse the column with DI water to remove salt before switching to organic to prevent salt precipitation. For overnight storage flush the column with the low salt concentration mobile phase at 10 - 20% of the max. 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>B. SPECIFICATIONS</b>	
The performance of TSK-GEL Ether-5PW columns is tested under the conditions described in the Data Sheet. All columns have passed the following quality control specifications:	
1. Number of Theoretical Plates (N):	$\geq$ 600 (5.0mm ID Glass x 5.0cm) $\geq$ 1,000 (2.0mm ID x 7.5cm, 7.5mm ID x 7.5cm, and 8.0mm ID Glass x 7.5cm)
2. Asymmetry Factor (AF):	0.8 - 1.8 (2.0mm ID x 7.5cm) 1.0 - 2.0 (other columns)

DS1036 Revised 18AUGUST2009

**Tosoh Bioscience LLC**  
156 Keystone Drive  
Montgomeryville, PA 18936  
Phone: (215) 283-5000  
Orders & Technical Service: (800) 366-4875  
FAX: (215) 283-5035



MD Scientific is authorized distributor  
in Denmark for Tosoh Bioscience  
www.md-scientific.dk  
info@md-scientific.dk  
Tel. 7027 8565