

TSK-GEL® Phenyl-5PW RP Products

Part Numbers:	18756, 2.0mm ID x 7.5cm, 10µm	
	08043, 4.6mm ID x 7.5cm, 10µm	19007, Guard Cartridge, 3.2mm ID x 1.5cm
	14006, 5.0mm ID Glass x 5.0cm, 10µm	19018, Guard Cartridge holder for PN 19007
	14007, 8.0mm ID Glass x 7.5cm, 10µm	14022, Guard gel Kit Glass, use with PN 14006 & 14007, 20µm
	16260, 21.5 mm ID x 15cm, 13µm	02428, PrepGuard gel kit, for PN 16260, 20µm
	16261, 55mm ID x 20cm, 20µm	16262, Guard column for PN 16261, 20µm
		14594, Pre-injector membrane filter holder, SS
		03409, 13mm Nylon Membrane filter, 0.45µm, for PN 14594

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

A. OPERATING CONDITIONS

01. Shipping Solvent: 30% Methanol - 70% Water
02. Max. Flow Rate:
- 0.12 mL/min (2.0mm ID x 7.5cm)
 - 1.2 mL/min (4.6mm ID x 7.5cm and 5.0mm ID Glass x 5.0cm)
 - 2.5 mL/min (7.5mm ID Glass x 8.0cm)
 - 8.0 mL/min (21.5mm ID x 15cm)
- When a buffer with high viscosity is used, the maximum flow rate may have to be reduced so as not to exceed the recommended pressure drop. When changing solvents, use half the maximum flow rate.
03. Standard Flow Rate:
- 0.05 – 0.1 mL/min (2.0mm ID x 7.5cm)
 - 0.5 - 1.0 mL/min (4.6mm ID x 7.5cm and 5.0mm ID Glass x 5.0cm)
 - 1.0 - 2.0 mL/min (8.0mm ID Glass x 7.5cm)
 - 4.0 - 6.0 mL/min (21.5mm ID 15cm)
04. Max. Pressure:
- 1.0 MPa (2.0mm ID x 7.5cm)
 - 3.0 MPa (4.6mm ID x 7.5cm)
 - 2.0 MPa (5.0mm ID Glass x 5.0cm and 8.0mm ID Glass x 7.5cm)
 - 3.0 MPa (21.5mm ID x 15cm)
05. pH Range: 2.0 - 12.0
06. Organic Conc.: 0 - 100%
07. Temperature: 4 - 60°C
08. Cleaning Solvents:
- (1) Acetonitrile or Methanol, or
 - (2) Aqueous buffer in organic solvent, or
 - (3) 0.1 - 0.2M NaOH, or
 - (4) 20 - 40% acetic acid aq.

NOTE: Clean the column regularly by injecting up to one column volume of 0.1 - 0.2M NaOH in 250 µl increments.

09. Storage: Store the column in shipping solvent when it will not be used the next day. For overnight storage flush the 4.6mm ID column with the mobile phase at 0.2 mL/min. Flush the 2mm ID column at 0.05mL/min overnight. Flush the larger columns at half the minimum standard flow rate. Prevent air from entering the column!
10. Column Protection: The use of guard columns or filters is recommended to prolong the life of the analytical column. Guard column or filter life depends greatly on sample cleanliness. As a general rule, guard columns or filters should be replaced after every 30 - 40 sample injections, when the peaks become excessively wide, or when the peaks show splitting.

B. SPECIFICATIONS

The performance of TSK-GEL Phenyl-5PW RP columns is tested under the conditions described in the Data Sheet. All columns have passed the following quality control specifications:

01. Number of Theoretical Plates (N):
> 700 (8.0mm ID Glass x 7.5cm)
> 500 (4.6mm ID x 7.5cm)
> 400 (2.0mm ID & 5.0mm ID Glass)
> 1,000 (21.5mm ID x 15cm)
02. Asymmetry Factor (AF):
0.8 - 1.6 (2.0mm ID & 4.6mm ID)
0.8 - 1.8 (21.5mm ID x 15cm)