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## OPERATING CONDITIONS and SPECIFICATIONS

### TSKgel® Phenyl-5PW RP Products

<b>Part Numbers:</b>	0018756	2.0 mm ID x 7.5 cm L	<b>10 µm</b>
	0008043	4.6 mm ID x 7.5 cm L	<b>10 µm</b>
	0014126	3.2 mm ID x 1.5 cm L	Guard Cartridge for PN 0008043
	0014007	8.0 mm ID x 7.5 cm L	Glass
	0016260	21.5 mm ID x 15.0 cm L	<b>13 µm</b>

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

#### A. OPERATING CONDITIONS

- |                      |                          |              |           |
|----------------------|--------------------------|--------------|-----------|
| 1. Shipping Solvent: | 30% Methanol - 70% Water |              |           |
| 2. Max.Flow Rate:    | 0.12 mL/min              | 2.0 mm ID x  | 7.5 cm L  |
|                      | 1.20 mL/min              | 4.6 mm ID x  | 7.5 cm L  |
|                      | 2.50 mL/min              | 8.0 mm ID x  | 7.5 cm L  |
|                      | 8.00 mL/min              | 21.5 mm ID x | 15.0 cm L |

**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.

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|------------------------|--------------------|--------------|-----------|
| 3. Standard Flow Rate: | 0.05 - 0.10 mL/min | 2.0 mm ID x  | 7.5 cm L  |
|                        | 0.50 - 1.00 mL/min | 4.6 mm ID x  | 7.5 cm L  |
|                        | 1.00 - 2.00 mL/min | 8.0 mm ID x  | 7.5 cm L  |
|                        | 6.00 - 8.00 mL/min | 21.5 mm ID x | 15.0 cm L |
| 4. Max. Pressure:      | 1 MPa              | 2.0 mm ID x  | 7.5 cm L  |
|                        | 3 MPa              | 4.6 mm ID x  | 7.5 cm L  |
|                        | 2 MPa              | 8.0 mm ID x  | 7.5 cm L  |
|                        | 3 MPa              | 21.5 mm ID x | 15.0 cm L |

5. pH Range: 2.0 - 12.0

6. Organic Conc.: 0 - 100%

7. Temperature: 4 - 60°C

8. 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.

9. Storage: Store the column in shipping solvent 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!

10. 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.

**B. SPECIFICATIONS**

The performance of **TSKgel** Phenyl-5PW RP 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):	≥ 700	8.0 mm ID x 7.5 cm L Glass
	≥ 500	4.6 mm ID x 7.5 cm L
	≥ 400	2.0 mm ID
	≥ 1000	21.5 mm ID x 15.0 cm L
Asymmetry Factor (AF):	0.8 - 1.6	2.0 mm ID and 4.6 mm ID
	1.0 - 2.0	glass columns
	0.8 - 1.8	21.5 mm ID x 15.0 cm L