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## OPERATING CONDITIONS and SPECIFICATIONS

### TSKgel® Boronate-5PW Products

<b>Part Numbers:</b>	0013066	7.5 mm ID x 7.5 cm L		<b>10 µm</b>
	0014449	5.0 mm ID x 5.0 cm L	Glass	<b>10 µm</b>
	0013125		Boronate-5PW Guard Gel Kit	<b>10 µm</b>
	0014451		Guard Kit Glass	

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

#### A. OPERATING CONDITIONS

- Shipping Solvent: Distilled water
  - Max. Flow Rate: 1.2 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.
- Coupling Flow Rate: 0.5 - 1.0 mL/min
  - Max. Pressure:

1 MPa	7.5 mm ID x 7.5 cm L
2 MPa	5.0 mm ID x 5.0 cm L
  - pH Range: 2.0 – 9.0 pH above 9 can only be used for a short time
  - Salt Conc.: ≤ 3 Molar
  - Organic Conc.: ≤ 20%
  - Temperature: ≥ 0°C
  - Cleaning Solvents:
    - 0.1 - 0.2 M NaOH, or
    - 20 - 40% acetic acid aq.
    - Aqueous buffer in organic solvent, or, if nothing else was successful,
    - Urea or non-ionic surfactant in buffer

**NOTE:** Clean the column regularly by injecting up to one column volume 0.1 - 0.2 M NaOH in 250 – 500 µL increments.

- Storage: Store the column in the shipping solvent at about 4°C 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!
- Column Protection: Guard columns prolong the life of the analytical column. Guard column life depends greatly on sample cleanliness. As a general rule, guard columns are replaced after 30-40 sample injections, when the peaks become excessively wide, or when the peaks show splitting.

#### B. SPECIFICATIONS

The performance of **TSKgel** Boronate-5PW 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):	≥ 1,300	7.5 mm ID x 7.5 cm L
	≥ 500	5.0 mm ID x 5.0 cm L
Asymmetry Factor (AF):	1.0 – 2.0	