



Zettachring 6, 70567 Stuttgart, Germany
 Tel: +49-711-13257-0 Fax: +49-711-13257-89
 E-Mail: info.tbq@tosoh.com
 Web: www.tosohbioscience.com

3604 Horizon Drive, Suite 100, King of Prussia, PA 19406, USA
 Tel: +1 800-366-4875 Fax: +1 610-272-3028
 E-Mail: info.tbl@tosoh.com
 Web: www.tosohbioscience.com

OPERATING CONDITIONS and SPECIFICATIONS

TSKgel® Boronate-5PW Products

Part Numbers:	13066	7.5 mm ID x 7.5 cm L		10 µm
	14449	5.0 mm ID x 5.0 cm L	Glass	10 µm
	13125		Guardgel Kit	
	14451		Guard Kit Glass	for P/N 14449

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

A. OPERATING CONDITIONS

1. Shipping Solvent: Distilled Water
2. 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.

3. Standard Flow Rate: 0.5 - 1.0 ml/min
4. Max. Pressure:

10 kg/cm ²	=	150	psi	7.5 mm ID x 7.5 cm L
20 kg/cm ²	=	300	psi	5.0 mm ID x 5.0 cm L
5. pH Range: 2.0 - 9.0 pH above 9 can only be used for a short time
6. Salt Conc.: ≤ 3 Molar
7. Organic Conc.: ≤ 20%
8. Temperature: ≥ 0°C

9. Cleaning Solvents:
 - (1) 0.1 - 0.2 M NaOH, or
 - (2) 20 - 40% acetic acid aq.
 - (3) Aqueous buffer in organic solvent, or, if nothing else was successful,
 - (4) Urea or non-ionic surfactant in buffer, or

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

10. 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!
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.

B. SPECIFICATIONS

The performance of TSK-GEL 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)
	≥	500	(5.0 mm ID Glass x 5.0 cm)
Asymmetry Factor (AF):		1.0 - 2.0	(7.5mm ID x 7.5cm)
		1.0 - 3.0	(5.0mm ID Glass x 5.0cm)