



Im Leuschnerpark 4, 64347 Griesheim, Germany
 Tel: +49 6155-7043700 Fax: +49 6155-8357900
 E-Mail: info.tbg@tosoh.com
 Web: www.tosohbioscience.de

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® DEAE-5PW Products

Analytical/Semi-Prep:	0018757	2.0 mm ID x 7.5 cm L		10 µm
	0007164	7.5 mm ID x 7.5 cm L		10 µm
	0007210		Guardgel Kit	20 µm
	0007574	21.5 mm ID x 15.0 cm L		13 µm
	0016092		Prep Guardgel Kit for P/N 07574	20 µm
	0013061	5.0 mm ID x 5.0 cm L	Glass	10 µm
	0008802	8.0 mm ID x 7.5 cm L	Glass,	10 µm
	0008806		Guardgel Kit Glass	20 µm
	0014016	20.0 mm ID x 15.0 cm L	Glass	13 µm
	0014466	20.0 mm ID x 2.0 cm L	Guardcolumn; Glass	13 µm

Small Ion Capacity: > 0.1 meq/mL **Counter Ion:** Cl⁻

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

A. OPERATING CONDITIONS

1. Shipping Solvent: Distilled and Deionized Water
2. Max.Flow Rate:

0.12 mL/min	2.0 mm ID
1.0 mL/min	5.0 mm ID x 5.0 cm L
1.2 mL/min	7.5 mm ID x 7.5 cm L and 8.0 mm ID x 7.5 cm L Glass
8.0 mL/min	21.5 mm ID x 15.0 cm L and 20.0 mm ID x 15.0 cm L Glass

NOTE: When changing solvents, use a flow rate equal to 50% of the maximum flow rate (20% for prep columns).

3. Standard Flow Rate:

0.05 - 0.10 mL/min	2.0 mm ID
0.50 - 0.80 mL/min	5.0 mm ID x 5.0 cm L
0.50 - 1.00 mL/min	7.5 mm ID x 7.5 cm L and 8.0 mm ID x 7.5 cm L Glass
4.00 - 6.00 mL/min	21.5 mm ID x 15.0 cm L and 20.0 mm ID x 15.0 cm L Glass
4. Max. Pressure:

1.0 MPa	8.0 mm ID x 7.5 cm L
1.5 MPa	2.0 mm ID x 7.5 cm L; 7.5 mm ID x 7.5 cm L; 5.0 mm ID Glass and 20.0 mm ID Glass
2.5 MPa	21.5 mm ID x 15.0 cm L

5. pH Range: 2.0 - 12.0
6. Salt Conc.: ≤ 0.5 Molar
7. Organic Conc.: ≤ 20%
8. Temperature: 10-45°C Reduce flow rate when operating below 10°C.
9. Cleaning Solvents:
 - (1) 0.1 - 0.2 M NaOH, and, if not successful,
 - (2) 20 - 40% acetic acid aq., or
 - (3) Aqueous buffer in 30% acetonitrile or methanol, or, if nothing else is successful
 - (4) Urea or nonionic surfactant in buffer.

NOTE: Clean the column regularly by injecting up to one column volume 0.1 - 0.2 M NaOH in 250µl increments. Use a proportionally larger flow for (semi-) prep columns.

10. Storage: Rinse the column with 3 to 5 CV of DI water. Then store it in 20% ethanol or methanol in DI water when it will not be used the next day. For overnight storage flush the column with the low salt concentration mobile phase at 10 - 20% of the maximum 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.

Note our technical hotline tel +49 6155 70437-36 and e-mail, techsupport.tbg@tosoh.com

B. SPECIFICATIONS

The performance of **TSKgel** DEAE-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):	≥	700	5.0 mm ID Glass
	≥	1,300	7.5 mm ID, .2.0 mm ID and 8.0 mm ID Glass
	≥	3,000	21.5 mm ID and 20.0 mm ID Glass
Asymmetry Factor (AF):		0.8 - 1.6	for analytical/semi-prep columns; no spec for prep columns