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## OPERATING CONDITIONS AND SPECIFICATIONS

### TSKgel® Protein A-5PW

**Part Numbers:** 0023483 **TSKgel Protein A-5PW**, 4.6 mm ID x 3.5 cm L, 20 µm, PEEK

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

#### A. OPERATING CONDITIONS

1. **Shipping Solvent:** Aqueous solution contains 20% ethanol
2. **Max. flow rate:** 4.0 mL/min (standard operating flow rate: 2.0 mL/min)
3. **Max. pressure:** 2.0 MPa

<b>4. pH range:</b>	2.0 - 12.0
<b>5. Bind and wash buffer:</b>	20 mmol/L sodium phosphate buffer, pH 7.0 to 7.5
	<b>Note:</b> 100-150 mmol/L NaCl can be added to the bind and wash buffer. However, high salt concentration can cause non-specific binding.
<b>6. Elution buffer:</b>	<p>Acidic buffers, pH 2.0 - 3.0</p> <p>Compatible acidic buffers:</p> <p>12 mmol/L HCl (pH 2.0)          20 to 100 mmol/L sodium phosphate buffer, pH 2.5 - 3.5          20 to 100 mmol/L sodium citrate buffer, pH 2.5 - 3.5          20 to 100 mmol/L glycine, pH 2.5 - 3.5          2 - 5% acetic acid.          10 mmol/L sodium phosphate buffer, pH 2.5 + 10% ethanol (above 20% organic solvent should be avoided)</p> <p><b>Note:</b> To reduce high baseline, adjusting buffer pH with low (diluted) concentration of acid such as 100 mmol/L phosphoric acid is recommended.</p>
<b>7. Temperature:</b>	4 – 30 °C
<b>8. Cleaning solvents:</b>	Wash column with 0.5 mL of 0.1mol/L NaOH solution at 0.5 mL/min. Then, equilibrate column with 20 mmol/L sodium phosphate buffer, pH 7.4, for 20 CV at 0.5 mL/min.

<p><b>9. Storage</b></p>	<p><b>DO NOT</b> use or store column above 20% organic solvent. Above 20% organic solvent usage will damage the Protein A ligand.</p> <p>1. Short-term storage (1-5 days): Wash column with 20 mmol/L sodium phosphate buffer, pH 7.4, for 20 CV at 0.5 mL/min. Cap both ends of column and store it in this buffer at the recommended storage temperature.</p> <p>2. Long-term storage: Wash column with 20% ethanol [water (80%) :ethanol (20%)] at 0.5 mL/min for 20 CV and store column in this solvent at the recommended storage temperature</p> <p>3. Storage temperature: store column at 2 - 8 °C (Do not freeze column. Freezing will damage the column.)</p>
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**B. SPECIFICATION**

The performance of TSKgel Protein A 5-PW columns is tested under the conditions described in the Data Sheet. All columns have passed the following quality control specifications

Theoretical plates	≥ 280
Asymmetry factor	0.6 - 1.5