

OPERATING CONDITIONS AND SPECIFICATIONS

# TSK-GEL® BioAssist® S Products

**Part Numbers:** 19686, 4.6mm ID X 5cm, PEEK Column  
19834, PEEK Endfitting with 5um frit

**Particle Size:** 7µm

This sheet contains the recommended operating conditions and the specifications for TSKgel® BioAssist® S columns. Installation instructions and column care information are described in a separate Instruction Manual.

## A. OPERATING CONDITIONS

- Shipping Solvent: 20% Ethanol in 20mmol/L phosphate buffer (pH 6.5)
- Max. Flow Rate: 1.0 mL/min.  
When a buffer with high viscosity is used, the maximum flow rate may have to be reduced so as not to exceed the recommended pressure drop. When changing solvents, use half the maximum flow rate.
- Standard Flow Rate: 0.3 - 0.8 mL/min
- Max. Pressure: 25 kg/cm<sup>2</sup> = 375 psi = 2.5 MPa
- pH Range: 2.0 - 12.0 (less than one month)  
3.0 - 10.0 (more than one month)
- Salt Conc.: ≤ 2.5 mol/L
- Organic Conc.: ≤ 30 %
- Temperature: 4 - 60°C
- Cleaning Solvents: (1) 0.1 - 0.5mol/L NaOH,  
(2) 20 - 40% acetic acid aqueous  
(3) Aqueous buffer in 30% acetonitrile or methanol,  
(4) 0.5 mol/L NaOH + 30% Ethanol  
(5) 8mol/L Urea, or 6mol/L Guanidine or nonionic surfactant in buffer.

**NOTE:**

Clean the column regularly by injecting up to one column volume 0.1 - 0.5mol/L NaOH in 250µl increments. Column cleaning could be also performed in reverse direction at ~ 25% standard flow rate.

- Storage: The column can be stored in mobile phase for short periods. For longer term storage, use 20% aqueous ethanol in 20mM phosphate buffer (pH 6.5). Prevent air from entering the column, and keep it from drying out.
- Solvent Compatibility: Avoid long term exposure (more than one month) to concentrated alkali or acid solutions.
- Connection of Column: Connect the PEEK column with a 10-32 polymer nut and ferrule.

## B. SPECIFICATIONS

The performance of TSKgel® BioAssist® S 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): ≥ 1,500
- Asymmetry Factor (AF): 0.9 - 1.8