



Zettachring 6, 70567 Stuttgart, Germany  
Tel: +49-711-13257-0 Fax: +49-711-13257-89  
E-Mail: [info.sep.eu@tosoh.com](mailto:info.sep.eu@tosoh.com)  
Web: [www.tosohbioscience.com](http://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.sep.am@tosoh.com](mailto:info.sep.am@tosoh.com)  
Web: [www.tosohbioscience.com](http://www.tosohbioscience.com)

## OPERATING CONDITIONS and SPECIFICATIONS

### TSK-GEL® Octadecyl-NPR Products

<b>Part Numbers:</b>	14005	4.6 mm ID x 3.5 cm L	<b>2.5 µm</b>
<b>Accessories:</b>	03410	Pre-Column Filter with 0.5 micron SS Frit	
	03411	Replacement 0.5 µ Frits, for 03410, pk 10	

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

#### A. OPERATING CONDITIONS

1. Shipping Solvent: 70% Methanol - 30% Water (v/v)

2. Max. Flow Rate: 1.6 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: 1.0 - 1.5 ml/min

4. Max. Pressure: 200 kg/cm<sup>2</sup> = 3000 psi

5. pH Range: 2 - 12 pH above 12 or below 2 can only be used for a short time

6. Salt Conc.: ≤ 0.5 Molar

7. Organic Conc.: 0 - 100%

8. Temperature: 0 - 60°C

9. Cleaning Solvents:  
(1) Acetonitrile or Methanol, or  
(2) Aqueous buffer in organic solvent  
(3) 0.1 - 0.2 M NaOH, or  
(4) 20 - 40% acetic acid aq., or  
(5) 60% Acetonitrile/40% 0.2 M NaOH

**NOTE:**

Clean the column regularly by injecting up to one column volume cleaning solution in 100 - 250 µl increments.

10. Storage: Store the column in the shipping solvent when it will not be used the next day. For overnight storage flush the column with the mobile phase at 0.2 ml/min. Avoid air to enter the column!

11. Column Protection: No guard column is available for the TSK-GEL Octadecyl-NPR column. Be sure to use a filter after the injector with 0.5 micron pores to avoid frequent plugging of the one micron pore size NPR column frit. We also recommend a pre-injector membrane filter to prevent particles from pump seal wear to reach the column.

**NOTE:**

Use high quality reagents, water and solvents for preparing buffers. Fouling of the resin, leading to a loss in retention and/or efficiency occurs faster due to the small surface area of non-porous resin particles.

#### B. SPECIFICATIONS

The performance of TSK-GEL Octadecyl-NPR 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): ≥ 1000

Asymmetry Factor (AF): 1.0 - 2.0