

## Supplemental Information related to HPLC HIC Column

### INSTRUCTION MANUAL for TSKgel<sup>®</sup> Butyl-NPR

To help protect you and/or your property from potential damage and ensure personal safety, please read the "Precautions" which are printed in the beginning of the "HPLC HIC Column" INSTRUCTION MANUAL thoroughly before using the above TSKgel Butyl-NPR.

For this TSKgel Butyl-NPR columns, please read section 1, section 6 (Table-1), section 8 (Table-2), and section 11 on this supplemental information sheet instead of the corresponding sections you find on the "HPLC HIC Column" INSTRUCTION MANUAL.

Precautions: Shipping Solvents : distilled and deionized water

#### 1. Introduction

These TSKgel Butyl-NPR columns are suitable for Hydrophobic interaction chromatography of biomolecules such as proteins and peptides.

In this supplemental information sheet, only those instructions different from the other TSK-GEL HIC Columns are included.

Please refer to the "HPLC HIC Column" INSTRUCTION MANUAL regarding instructions which are not mentioned in this document.

#### 6. Flow Rates

Table-1 Recommended flow rates

Cat. No.	Types	Column Dimensions (mm ID × cm)	Max. Flow Rate (mL/min)	Recommended Flow Rate (mL/min)	Max. Pressure Drop (MPa)
0014947	TSKgel Butyl-NPR	4.6 × 3.5	1.2	0.5 - 1.0	20.0
0042168	TSKgel Butyl-NPR	4.6 × 10	1.0		

#### 8. Guard Column / In-line filter

There is no guard column for TSKgel Butyl-NPR columns. Please install an in-line filter between the injection valve and the feed pump to prevent small particles and impurities in the mobile phase from entering the column. The filter will also need to be replaced if a pressure increase is observed.

Table-2 Guard Columns / In-line Filter

Cat. No.	Types
0014594	Filter assembly for NPR column
0006280	In-line filter

#### 11. Quality Specifications and Warranty

##### 11-1 Inspection Data

Cat. No.	Types	Column Dimensions (mm ID × cm)	Eluent	Flow Rates (mL/min)	Sample	Detector (UV nm)
0014947	TSKgel Butyl-NPR	4.6 × 3.5	A) 1.8 mol/L Ammonium sulfate in 0.1 mol/L Sodium phosphate (pH 7.0) <sup>*1</sup> B) 0.1 mol/L Sodium phosphate (pH 7.0)	1.0	2 g/L Lysozyme, 4 g/L Ovalbumin 6 μL	280
0042168	TSKgel Butyl-NPR	4.6 × 10	25 mmol/L Sodium sulfate	0.5	3 g/L Glycine 5 μL	215

\*1 : Linear gradient 0 to 100 B% 10 min.

##### 11-2 Quality Specifications

Cat. No.	Types	Column Dimensions (mm ID × cm)	No. of Theoretical Plates (N/Column)	Asymmetry Factor (As)	Peak Resolution
0014947	TSKgel Butyl-NPR	4.6 × 3.5	-	-	≥3.0
0042168	TSKgel Butyl-NPR	4.6 × 10	≥4,000	1.0 - 3.0	-