



TSK-GEL® ODS-140HTP

Ultra High Performance Reversed Phase Columns for high Throughput Analysis

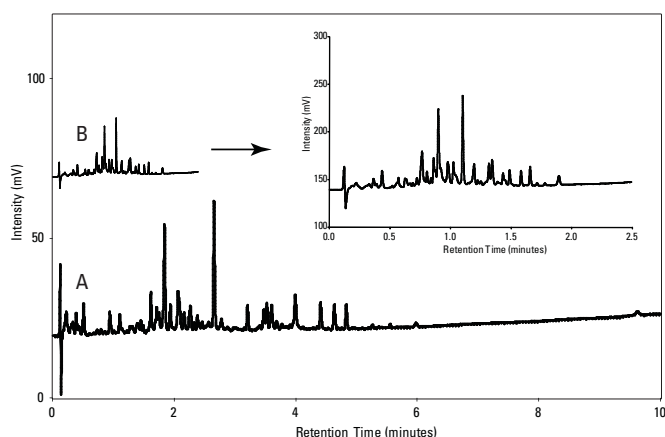
PRODUCT HIGHLIGHTS

- ❖ Physically stable columns
- ❖ Moderate pressure at high flow rates
- ❖ High resolution and high efficiency
- ❖ Ideal for high throughput applications
- ❖ Compatible with HPLC and UPLC® system
- ❖ Available in 2.3 µm particle size, 2.1 mm ID in 5 cm and 10 cm lengths

INTRODUCTION

TSK-GEL ODS-140HTP columns were developed for use in high throughput applications, including drug discovery, pharmacokinetics and peptide digest separations. These ODS columns are packed with 2.3 µm particles,

SEPARATION OF β-LACTOGLOBULIN TRYPTIC DIGEST



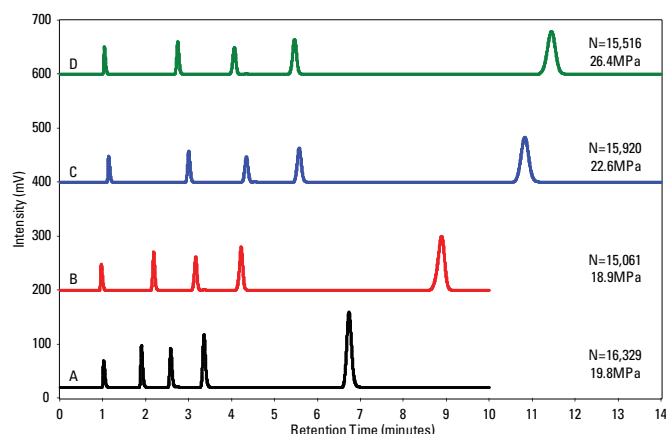
► **Figure 1**

Column: TSKgel ODS-140HTP, 2.3µm, (2.1mm ID x 5cm)
 Eluent: A: H₂O/ACN (95/5) + 0.1% TFA
 B: H₂O/ACN (50/50) + 0.1% TFA
 Flow rate: 1.0mL/min
 Detection: UV@220nm
 Temperature: 40°C
 Injection volume: 10µL
 Gradient: 0-100%B (Linear gradient)
 Gradient time: A: 10min
 B: 2.5min
 Sample: β-lactoglobulin tryptic digest

providing high resolution and short analysis times at moderate pressure. The lower pressure drop reduces the burden on the hardware, allowing the TSK-GEL ODS-140HTP columns to be used with either UPLC® (up to 9000 psi) or conventional HPLC systems.

The polylayer bonding chemistry of these columns results in highly efficient and physically stable columns when operated at high flow rates under high pressure. High efficiency and shorter retention make the TSK-GEL ODS-140HTP columns an excellent fit for high throughput separations.

COMPARISON OF SUB-3µm ODS COLUMNS



► **FIGURE 2**

Columns: A. TSKgel ODS-140HTP, 2.3µm, (2.1mm ID x 10cm)
 B. Ascentis Express C18, 2.7µm, (2.1mm ID x 10cm)
 C. Luna C18(2)-HST, 2.5µm, (2mm ID x 10cm)
 D. YMC UltraHT Pro C18, 2µm, (2mm ID x 10cm)
 Eluent: H₂O/MeOH=30/70
 Flow Rate: 0.2mL/min
 Detection: UV@254nm
 Temperature: 25°C
 Injection Volume: 2µL
 Samples: 1. uracil
 2. benzene
 3. toluene
 4. naphthalene
 5. fluorene

COMPARISON OF FLOW RATE - PRESSURE DROP

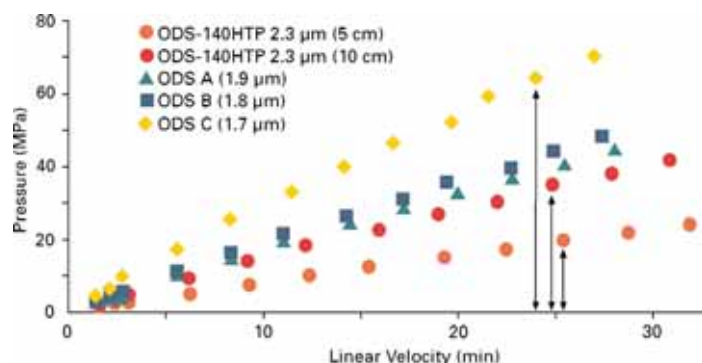


FIGURE 3

Conditions

Column: TSKgel ODS-140HTP 2.3 µm
 (2.0 mm ID x 5.0 cm, 10 cm L)
 Sub-2 µm ODS columns
 (2.1 mm ID x 5.0 cm L)
 Eluent: H₂O/CH₃CN = 50/50

APPLICATION

Excellent resolution at high speed can be achieved on a TSKgel ODS-140HTP column with the separation of a β-lactoglobulin tryptic digest (see Figure 1). Peak capacity improved when using a longer gradient time.

PERFORMANCE DATA

Column efficiency of a TSKgel ODS-140HTP column compares favorably with other sub-3µm ODS columns (see Figure 2). Higher efficiency and a shorter retention time make the TSK-GEL ODS-140HTP column more suitable for high throughput separations.

The backpressure of a TSKgel ODS-140HTP column is less than half of the pressure of a sub-2 µm column (see Figure 3). Even a 10 cm TSKgel ODS-140HTP column shows favourable pressure/flow characteristics compared to 5 cm sub-2 µm columns.

For further details of choice and selection of the TSK-GEL® column that best suits your particular separation needs, please contact us:

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 or
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 or
 www.tskgel.com

Ordering information

TSKgel ODS-140HTP

Part-No	Description	Matrix	Housing	Dimensions
21927	TSKgel ODS-140HTP, 2.3 µm, 140 Å	Silica	Stainless steel	2.1 mm ID x 5 cm L
21928	TSKgel ODS-140HTP, 2.3 µm, 140 Å	Silica	Stainless steel	2.1 mm ID x 10 cm L