

Product Specification Sheet

Product Name:	Zetadex-25 Medium Gel Filtration Matrix in Phosphate Buffered Saline, pH 7.4 Contains 0.02% NaN ₃	
	For process purification proteins and nucleic acids	
Trade Name:	Z-25M	
Catalog Number:	TM-0107	

Lot Data	Specification	
Dry Particle Size:	50 – 150 µm (>80%)	
Water Regain:	2.15- 2.25 ml/g	
Swelling:	4 - 6 ml/g	
pH:	7.4 ± 0.25	
Appearance:	White solid suspension	
Sedimentation:	See document: 2010-02-11 CM-03 ZDX-25m Spec.pdf	
Infra Red Spectrum	See document 2010-02-11 CM-03 ZDX-25m Spec.pdf	

Application Note

Zetadex-25 Medium is a size-exclusion matrix. Molecules purified with Zetadex-25 Medium are separated according to size. Smaller molecules pass significantly slower through the column than larger molecules. Buffer and pH effects on resolution are minimal. The size exclusion cut-off for Zetadex-25 Medium is set at for 10 kD proteins and 10 bp for nucleic acids. Purified biomolecules are not significantly diluted when processed using Zetadex-25 Medium.

Filling and Packing Columns

Hydrated Zetadex-25 Medium is provided in a settled gel volume to buffer volume ratio of 1:1, degassed and ready to use. Filling a column requires that the slurry be not too thick as to retain air bubbles. A settled gel volume to buffer volume ratio of 3:1 is optimal for this purpose. The remaining buffer may be used later for column packing.

To fill, pour the Z-25 slurry into a tilted column. Alternatively, a funnel may be used, with the tip of the funnel touching the inside wall of the column to prevent splashing of the slurry. A gel reservoir or column extension is desirable for filling the whole column in a single operation. To finish packing the gel bed, a peristaltic pump may be employed. Use as high a flow rate as possible without deforming the beads.

Precautions for Safe Handling

As part of good industrial safety and personal hygiene, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing. Wear gloves when handling. Keep container tightly closed. Suitable for any general chemical storage area.

Bead structure: Cross-linked spherical dextran composite
 Bead size (Dry): 50-150 µm
 Bead size (Wet): 85-260 µm

Maximum operating pressure: Generally obeys Darcy's Law: $U = K_o \frac{\Delta P}{L}$ where

U = linear flow rate, cm/hour
 ΔP = pressure drop over gel bed, cm H₂O
 L = bed ht, in cm
 K_o = 80 for Z-25 medium

Chemical stability: All commonly used buffers, including: 0.2M NaOH; 0.2M HCl; 1M acetic acid; 8M urea; 6M guanidine HCl; 1% SOS, 24% Ethanol; 30% Propanol; 30% Acetonitrile.

pH stability: 2.0 to 13.0

Autoclavable: 121°C, pH 7 for 30 minutes

Storage & Shipping: Ambient. DO NOT FREEZE.

For laboratory use only, not for drug, household or other use.