Prepacked Desalting Column

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1. Product Description

The **Prepacked Desalting Column** is suitable for desalting, buffer displacement or small molecule removal of proteins with molecular weight greater than 5000 or other large molecule samples.

The **Prepacked Desalting Column** contains 8.3 ml Smartdex G-25. Smartdex G-25 series medium is a kind of dextran as matrix of gel filtration chromatography medium, the main working principle is to use a mesh structure of dextran gel molecular sieves, depending on the molecular size of the separated material for separation.

The **Prepacked Desalting Column** selects microspheres with uniform particle size as the filling medium to make the liquid flow through fast and stable, with a single sample desalting time of about 10 min.

Table 1. Characteristics of **Prepacked Desalting Column**

Item	Description
medium	Smartdex G-25
Average particle size D50 (μm)	200-250
column volume	8.3 ml
Maximum loading quantity	2.5 ml
desalting efficiency	> 90%
Gravity flow rate range (pure water)	1.5-2.5 ml/min
Exclusion limit	Mr 5000
Storage	2-8℃

2. Purification Procedure

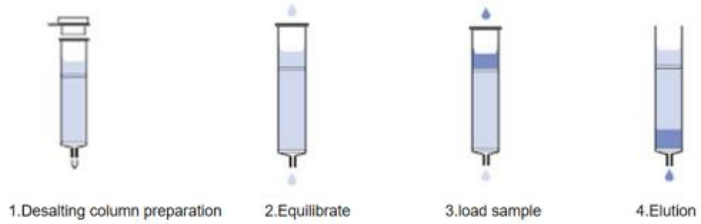
2.1 Buffer Preparation

Water and chemicals used for buffer preparation should be of high purity. It is recommended filtering the buffers by passing them through a 0.22 or 0.45 μm filter before use.

2.2 Sample Preparation

It is recommended to filter the sample solution by passing them through a 0.22 μm or 0.45 μm filter before use.

2.3 Sample Desalination



1) Desalting column preparation

Fix **Prepacked Desalting Column** and remove the bottom plug and top plug. Allow storage buffer to drain from resin by gravity flow.

2) Equilibrate

Add Binding Bufffer (choose appropriate solution independently) for equilibration, repeat this step 5 times, use about 3 column volumes of Binding Buffer totally.

3) Sampling

You can add 1.0-2.5 ml of sample to the column tube, with a maximum sample loading of 2.5 ml, and dilute the sample to 1.0-2.5 ml with Binding Buffer when the volume is insufficient.

4) Elution

After the sample enters the packing, continue to add the Binding Buffer for elution, collect the eluate in separate tubes, starting with the addition of the sample, collecting 2.0 ml at the front end, and then collecting the sample at a fixed volume (0.5-1 ml/tube is recommended), and test the protein concentration and salt concentration in each tube to calculate the recovery and desalting efficiency. Equilibrium solution was added at least until protein elution was complete before stopping.

3. Cleaning And Preservation

3.1 Cleaning-in-place (CIP)

In order to remove residual impurities, such as denatured proteins or lipids, it is sometimes necessary to clean the desalted column in situ if the flow rate of the column becomes slower or the desalting effect becomes less effective. The commonly used cleaning solution is 0.1-0.2 M NaOH or non-ionic detergent.

1) 3 column volumes deionized water;

2) 1 column 0.1-0.2 M NaOH, 0.2 ml/min;

3) 10-15 column volumes deionized water, rinse to neutral pH.

3.2 Preservation

Rinse the medium with at least 3 column volumes of sterilization water, then cover the upper and lower plugs respectively, and store the medium in sterilization water (addition of appropriate antibacterial agents) at 2-8℃.

4. Related Products

Product	Cat. No.	Size
SpinDesalt Column	SEC02301	50T
SpinDesalt Column-P96	SEC04701	1 Plate
	SEC04702	5 Plates
SpinDesalt Column-3	SEC04601	1 Piece
	SEC04602	5 Piece
	SEC04603	20 Piece
SpinDesalt Column-10	SEC03201	1 Piece
	SEC03202	5 Piece
	SEC03203	20 Piece
Prepacked Desalting Column	SEC003C1	8.3 ml，1 Piece
	SEC003C2	8.3 ml，5 Piece
	SEC003C3	8.3 ml，20 Piece
PreCap Desalting	SEC018C11	1×1 ml
	SEC018C51	5×1 ml
	SEC018C15	1×5 ml
	SEC018C55	5×5 ml
	SEC018CS	3×1 ml+1×5 ml
SD-10 Adapter	SLM054	1 Piece
SD-3 Adapter	SLM058	1 Piece