



PreCap Desalting

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1. Product Description

PreCap Desalting is used for desalting proteins with molecular weight greater than 5000 or other large molecule samples, replacement of buffer solution, or removal of small molecules.

PreCap Desalting is packed with 1ml or 5ml of 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.

Table 1. Characteristics of **PreCap Desalting**

Item	Description
Medium	Smartdex G-25
Average particle size D50 (µm)	120-140 µm
Maximum loading quantity	10% column volume
Desalting efficiency	> 95%
Exclusion limit	Mr 5000
Storage	2-8°C

2. Purification Procedure

2.1 Buffer Preparation

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

The binding buffer is the solution used to protect the protein during the desalting. Choose as customer needs.

2.2 Sample Preparation

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

2.3 Sample Desalting

The **PreCap Desalting** is a pre-packed desalting column. Various conventional chromatography systems can be used to introduce the use of the **PreCap Desalting** method by taking ÄKTA instrument as an example.

- 1) Fill the syringe or pump tubing with binding buffer. Remove the stopper and connect the column to the syringe (with the provided connector), or pump tubing, "drop to drop" to avoid introducing air into the column. Remove the snap-off end at the column outlet.
- 2) Wash the column with at least 5 column volumes of binding buffer at 0.2 ml/min or 1 ml/min for 1 ml and 5 ml column respectively.
- 3) Apply 10% column volume of sample, using a syringe fitted to the connector or by pumping it onto the column at the same flow velocity. Dilute it with binding buffer to the corresponding volume if the sample volume is not enough.
- 4) Elute with binding buffer and collect eluent by fixed volume. Test the Sample recovery and desalting efficiency.

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 0.1-0.2m NaOH or non-ionic detergent.





- 1) 3 column volumes deionized water;
- 2) 1 column 0.1-0.2 M NaOH,0.2ml/min;
- 3) 10-15 column volumes deionized water,rinse to neutral pH.

Note: The viscosity of 0.1–0.2 M NaOH may increases the column pressure. Customers can reverse flushing according to need.

3.2 Preservation

Rinse the medium with at least 3 column volumes of 20% ethanol solution, then cover the upper and lower plugs respectively, and store the medium in 20% ethanol solution at 2-8°C.

4. Related Products

Product	Cat. No.	Size
SpinDesalt Column	SEC02301	50T
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

