



SpinDesalt Column-3

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1. Product Description

SpinDesalt Column-3 is a disposable, easy-to-operate purified product suitable for desalting, buffer replacement or small molecule removal of proteins or other large molecule samples with molecular weight greater than 5000Da.

The **SpinDesalt Column-3** contains 3ml Smartdex G-25. Smartdex G-25 series resin is a kind of dextran as matrix of gel filtration chromatography resin, 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. Product use eliminates the need for chromatographs, manual loading, centrifugation operations, waiting for lengthy gravity column passes, sample collection by component, and the ability to process multiple samples in minutes.

Table 1. Characteristics of **SpinDesalt Column-3**

Item	Description
Medium	Smartdex G-25
Average particle size D50 (µm)	120-140 µm
Column volume	3 ml
Maximum loading quantity	750 µl
Desalting efficiency	> 90%
Exclusion limit	Mr 5000
Storage	2-8℃

Table 2. Composition of the **SpinDesalt Column-3**

Component name	Specifications (1 Piece)	Specifications (5 Piece)	Specifications (20 Piece)
SpinDesalt Column	1 Piece	5 Piece	20 Piece
SD-3 Adapter	1	2	4

2. Purification Procedure

2.1 Buffer Preparation

The binding buffer can be selected as the customer (e.g. PBS, etc.). It is recommended filtering the buffers by passing them through a 0.22 µm 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 Desalting column preparation

- 1) Open the lower plug and upper cover of the desalting column, attach the desalting column to the SD-3 Adapter, and place it in a new 15 ml centrifuge tube.
- 2) Centrifuge 1500×g for 1 minute and pour away the protective liquid. Mark the outer tube wall at the top of the inclined plane of the compacted resin. All subsequent centrifugation operations place the column into the centrifuge with the markings facing outward.

Note: It is normal for the resin to appear compacted or off-wall after centrifugation.

- 3) Add 2 ml of equilibrium solution or ultrapure water to the desalting column. centrifuge at 1500×g for 1 min to remove the equilibrium solution or ultrapure water.
- 4) Repeat step 3 at least three times and discard the liquid from the 15 ml centrifuge tube.





2.4 Sample desalting

Place the equilibrated desalting column from step 2.3 in a new 15 ml centrifuge tube, place it vertically, slowly add the sample dropwise to the center of the resin with a pipette gun, let it stand vertically, and when all of the sample is in the resin, centrifuge it at 1500×g for 1 min, collect the flow-through sample, and discard the used desalting column.

2.5 Purification Flowchart

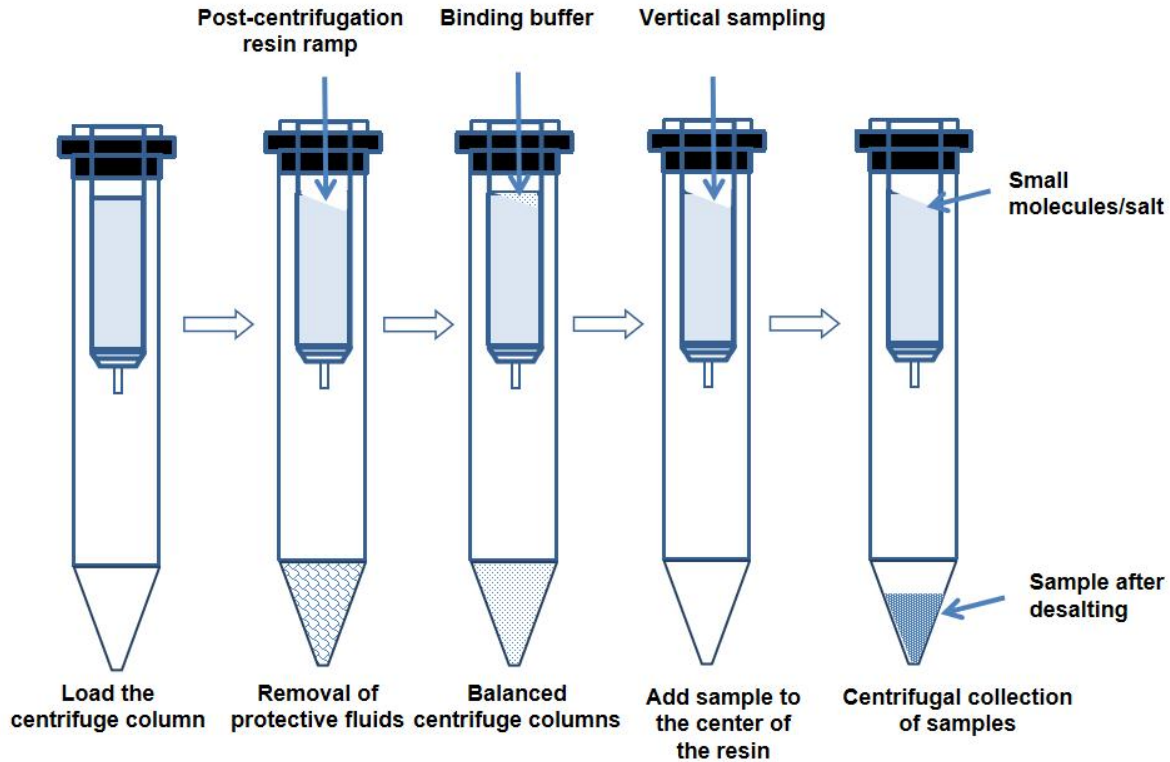


Figure 1. SpinDesalt Column-3 Usage Procedure

3. Frequently Asked Questions and Solutions

Questions	Cause analysis	Recommended Solutions
Sample or equilibrium fluid does not flow through the resin	Centrifugal operating problems	Ensure that the centrifuge is working properly.
		Make sure you remove the lower plug and the top cap.
Poor desalination/liquid exchange efficiency	Inaccurate samples	Samples can be added to the center of the resin ramp with the tip of the gun touching the resin.
		Avoid sample contact with the edge of the column during spiking.
	Incorrect centrifugal separation	For centrifuges with angular rotors, place the column markers facing outward for each centrifugation.
Do not exceed the recommended centrifugation speed and time.		
Low protein yield	Protein instability	Balance the column by replacing it with a suitable balancing fluid.





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

