Product Data Sheet

Seplife® DX 50/100

1. Description

Seplife® DX 50/100 is a hydrophilic inert media with controlled pore size distribution used for desalting and buffer exchange in industrial applications, prepared by crosslinked dextran.

- Designed for the removal of contaminants as a preliminary step to other chromatography techniques
- Minimize the dilution step
- The medium has an exclusion range is 1500-30000 Da globular proteins
- Supplied in dry form
- Regulatory Support File (RSF) is available for Seplife® DX 50/100

Seplife® DX 50/100 is a size exclusion chromatographic resin based on crosslinked dextran with a small particle size (50-150 micron).

2. Properties

Product	Seplife® DX 50/100
Appearance	White spherical beads
Type	Gel Filtration
Matrix	Crossed linked dextran
Particle size (dry, μm)	50-150
Swelling property (ml/g)	9-13
pH stability	3-10 (operational), 2-13 (CIP)
Chemical Stability	Stable in all common aqueous buffers; 1M sodium hydroxide; 8M urea; 6M guanidine hydrochloride; 70% ethanol.
Flow rate* (cm/h)	max. 180
Shipped as	dry

*Testing conditions: Chromatography column 16mm×400mm; column bed height 20cm; temperature 25° C; mobile phase water.

3. Instructions

3.1 Product pretreatment

Weigh the required Seplife® DX 50/100 and place it in 50~100 times distilled water for swelling. It usually takes 1~2 days to swell at room temperature, and 2 hours in boiling water to allow the media to fully swell until the volume no longer changes.

Note: Add distilled water before swelling to make it settle naturally. After natural settlement, if there are many fragments floating in the solution, they need to be removed by repeated rinsing to prevent blocking the column during chromatography and reducing the flow rate.

3.2 Column packing

Column packing should be performed according to standard operating procedures. It is important to ensure that each material is at its working temperature, and the media may need to be degassed before column packing.

3.3 Equilibration

Equilibrate the column with an appropriate 2-5 column volume buffer. Ensure the conductivity and pH of the effluent are exactly the same as the buffer.

3.4 Sample feeding

1. The separation of sample components by the media is carried out according to the molecular size of the components, and the ones with the larger molecular size flow through first.

2. The sample feeding for gel filtration is generally 5% of the column bed in volume, and we recommend that the initial sample feeding be controlled at 1-2% of the bed volume, which can be adjusted depending on the separation situation. When desalting, the sample feeding can reach 20% of the column bed volume. The selection of column height is also related to the separation requirements. The column height should be controlled below 40cm. Too high a gel layer will cause greater back pressure and should be avoided as much as possible.

Difficult-to-separate molecules must have a certain column height and flow rate control. A 5:1 height-to-diameter ratio for desalting is recommended.

3. Samples with particulates and precipitate should be filtered or centrifuged before the chromatography purification. The viscosity of the sample should not be too high, otherwise the separation effect will be reduced.

3.5 Elution

Elution can be done with salt-free water or with equilibration buffer as eluent. Complete separation can be achieved by adding NaCl to the equilibration buffer for gradient elution, or salt gradient elution.

3.6 Cleaning-In-Place (CIP)

After the media is used 10 times, a CIP is performed to remove the precipitated and stubborn residual proteins in the column bed. The method is to backwash with 4 bed volumes of 1M NaOH at 40cm/h, and

then regenerate with at least 3 bed volumes of equilibration buffer.

4. Storage

Seplife® DX 50/100 dry powder should be stored in a dry, ventilated and clean place at 4-30℃; the hydrated media should be stored in 20% ethanol solution. Avoid contact with oxidants and do not freeze.

5. Transportation

Avoid sunlight, rain, and heavy pressure during transportation. It is strictly forbidden to transport with toxic and hazardous materials.

6. Precautions

6.1 Samples must be clear of particles.

6.2 The sample and chromatography media must be thoroughly equilibrated with equilibration buffer before column chromatography can be performed.

6.3 The loaded column bed must have a flat surface, with no channel flow or air bubbles, otherwise it should be reloaded.

6.4 During the elution process, the flow rate should be strictly controlled. It should not be too fast.

6.5 During sample loading and the entire elution process, prevent the column surface from drying out.

6.6 This product should avoid contact with oxidants and avoid long exposure to air.

7. Ordering information

Product Name	References	Pack Size
Seplife® DX 50/100	D1007310M	25g
	D1007311M	100g
	D1007312M	500g
	D1007313M	1kg
	D1007314M	5kg
	D1007315M	10kg

Production date: See label

Expiry date: 5 years, under proper storage conditions

Manufacturer: Sunresin New Materials Co. Ltd.
Add:No. 135, Jinye Rd, Xi'an
Hi-Tech Industrial Development Zone, Shaanxi, 710076, China
www.seplite.com www.sunresin.com
E-mail: info.lifescience@sunresin.com