Seplife® RP LXMS 30

1. Description

Seplife® RP LXMS 30 is a polymeric resin for reversed phase chromatography (RPC) characterized by strong chemical stability and high rigidity for use in polishing steps requiring use of organic solvents and high flow rates.

- Highly uniform particle size for high resolution
- Styrene/divinylbenzene non functionalized resin characterized by high hydrophobicity
- Suitable for RPC in the separation of proteins, peptides, oligonucleotides and other small and medium size biomolecules
- High stability to CIP, organic solvents and pH (1-14)
- Regulatory Support File (RSF) is available for Seplife® RP LXMS 30

Seplife® RP LXMS 30 is a polymeric resin for RPC based on styrene/divinylbenzene with a highly uniform particle size (30 micron).

2. Properties

Product	Seplife® RP LXMS 30
Appearance	White spherical beads
Matrix	Styrene/Divinylbenzene
Particle size range (μm)	27-33
Typical pore size (Å)	300
pH stability	1-14
Chemical stability	Stable in commonly used aqueous buffers 1.0 M HCl, 100% ethanol, 100% methanol, 100% acetone, 1.0 M NaOH, 0.1% TFA in acetonitrile, 100% isopropanol,100% tetrahydrofuran
Flow rate* (cm/h)	≥600（2MPa）
Dynamic binding capacity** (mg/ml)	≥22
Maximum Pressure resistance	4.0 MPa / 40 Bar
Shipped as	Slurry in 20% ethanol solution

*Testing conditions: Chromatography column 10mm×200mm; Column bed height 200mm; Packing pressure 4.0 MPa; Mobile phase 100% MeOH.

**Testing conditions: Chromatography column 4.6mm×250mm; Column bed height 250mm; Packing pressure 4.0 MPa; Mobile phase water; Sample: Vitamin B12; Retention time 4 min.

3. Instructions

3.1 DAC Column Packing

Ensure the Seplife® RP LXMS 30 resin is fully dispersed and free of agglomerates; for this purpose shake or roll the bottle with the packing media or ultrasonicate for approximately five minutes. Use the following guideline to pack the chromatographic column:

(1) Measure the desired mass or volume of homogeneous slurry with about 1.2 times the column volume.

(2) Replace the 20% ethanol storage solution with 100% methanol or 80% acetonitrile solution and equilibrate overnight.

(3) Before loading the column, adjust the slurry concentration to 50-70% with 100% methanol or 80% acetonitrile solution, and pour the entire volume of homogenate into the DAC chromatography column.

(4) Complete the assembly of the column and operate the packing station according to the manufacturer instructions. A piston packing pressure of approximately 0.8-2.0 MPa is recommended. Ensure that the packing pump pressure has been calculated using the correct ratio for the column ID/packing station being used to give a piston pressure.

(5) Once column packing is complete, the flow of packing solvent is ceased and the pump stopped, allow the column to equilibrate for 10 minutes.

(6) Lock the column plunger in the compressed position so that the column can be operated in the Static Axial Compression (SAC) mode.

(7) The packed column is now ready for use. It can be used while still assembled on the packing station or it can be undocked for use in a purification facility .

3.2 Column Efficiency Evaluation

After packing, clean the chromatographic column with 3-5 CV of 100% methanol or 80% acetonitrile solution. The flow rate should be controlled at 120-180cm/h to balance and perform column efficiency test.

The test method for column efficiency of RP chromatography columns is as follows:

Mobile phase: 100% methanol or 80% acetonitrile solution

Linear flow rate: 120~180 cm/h

Sample: 1:9 (v:v) Acetone in 100% methanol or 80% acetonitrile

Loading volume: 1 % of column volume;

Detection: UV @ 254 or 280 nm ;

The prep-HPLC system geometry, including dead volume, will significantly affect the plate count determination.

3.3 Equilibration

Equilibrate with the mobile phase for 3-4CV, and control the flow rate at 120-180cm/h until the conductance and pH of the flow-through remain unchanged before loading the sample.

3.4 Sample feeding

The solid sample can be prepared by dissolving in the equilibrium solution. Low-concentration sample solutions can be concentrated in advance as much as possible while too high concentration sample solution can be diluted with the equilibration solution. To avoid clogging of the column, samples should be processed by centrifugation or membrane filtration. The feed amount is calculated according to the capacity of the resin and the content of the target protein in the feed solution. Before loading, ensure the sample buffer is as consistent as possible with the equilibration solution.

3.5 Elution

Use 2-10 CV of methanol, ethanol, acetonitrile, acetone, etc. (aqueous) solution to elute; use acid, caustic or buffer to adjust the pH or use a combination both to elute the molecules of interest.

3.6 Regeneration and CIP

First use acetonitrile, methanol, ethanol, acetone, NaOH in ethanol or other solvents to wash the column (3-4 CV) according to the operating flow rate, and then use the equilibration solution to rinse (3-4 CV).

4. Storage

Sealed and stored at 4-30°C (preservation solution is 20% ethanol) in a ventilated, dry and clean place, 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. Ordering information

Product Name	References	Pack Size
Seplife® RP LXMS 30	PS00042X(30)2-1	25ml
	PS00042X(30)2-2	100ml
	PS00042X(30)2-3	500ml
	PS00042X(30)2-4	1L
	PS00042X(30)2-5	5L
	PS00042X(30)2-6	10L

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

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