LT BIOTECH LTD.
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SP Persedex C-50

1. Basic product information

SP Persedex C-50 is a new type of highly cross-linked dextran chromatography resin. It has high flow rate, low back pressure, high dynamic capacity and good chemical stability. SP Persedex C-50 chromatography resin is easy to scale up, which can shorten production time, improve production efficiency and reduce the cost of large-scale production. It is used for the separation of low molecular weight proteins, peptides, nucleotides and macromolecules.

2. Chromatography resin parameters

Resin type	Strong cation exchange
Functional group	Sulfonopropyl
Matrix	Dextran G50
Median particle size (dry)	80 μm
Total ionic capacity (dry)	2.0–2.5 mmol/g
Dynamic binding capacity	≥100 mg ribonuclease/ml

3. Chemical resistance

pH stability*	2–13 (long term), 2–13 (CIP)
Chemical stability	All commonly used aqueous buffers, 8M urea, 6M guanidine hydrochloride
Temperature resistance	121°C, 0.1M NaCl solution for 30 minutes

** The physical and chemical properties and functions of the chromatographic resin have no obvious change after being placed in an environment of 40°C and pH 2–13 for 7 days.*

4. Method of use

Note: SP Persedex C-50 is granular and needs to be swollen when used. The swelling ratio depends on the buffer solution used. The swelling ratio in different solutions is different, and there are large differences. Do not use magnetic stirring during swelling, otherwise the gel will easily break.

4.1 Pre-processing
Weigh the required amount of SP Persedex C-50, place it in 50~100 volumes of distilled water or loading equilibration solution, and allow to swell. It usually takes 1~2 days to swell at room temperature, and 2 hours in boiling water.
4.2 Column packing
Column packing is performed according to standard operating procedures. It is important to ensure that each material is at working temperature; the gel needs to be degassed before packing.
4.3 Equilibration
Equilibrate the column with 2–5 column bed volume (hereinafter CV), and make sure the conductivity and pH of the eluent are exactly the same as that of the loading buffer.

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4.4 Sample loading
Determine the loading amount according to the target product concentration and the loading capacity of the gel.
4.5 Cleaning
After loading the sample, equilibrate the column with loading buffer to wash away unbound proteins and impurities until the conductivity and pH of the eluent are exactly the same as those of the loading buffer.
4.6 Elution
Use continuous or gradient elution with increasing salt concentration in the buffer or increasing pH.
4.7 Regeneration
First wash off the impurity protein on the column with 1~2M NaCl, then wash off the salt in the column with distilled water. Then process SP Persedex C-50 again according to the pretreatment process.

5. Storage

Keep the unopened chromatography resin in the original container and store at 4~30°C in a well-ventilated, dry and clean place. Do not freeze. Wash the used column with 2–3 CV of 20% ethanol solution and store at 2~8°C.

6. Destruction and recycling

Since chromatography resin is difficult to degrade in nature, it is recommended that the waste chromatography resin is incinerated to protect the environment. For chromatography resin that has been in contact with biologically active samples such as viruses and blood, please follow the local biosafety requirements before destroying or disposing of it.

7. Packing method

Detailed information on resin packaging is available on request. Please contact your local distributor.

8. Ordering information

Product name Persedex SP C-50

Product Cat. No	Package
268-00025	25 g
268-00100	100 g
268-00500	500 g
268-01000	1 kg
268-05000	5 kg
268-10000	10 kg