

# 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

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

## 3. Chemical resistance

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| <b>pH stability*</b>          | 2–13 (long term), 2–13 (CIP)                                           |
| <b>Chemical stability</b>     | All commonly used aqueous buffers, 8M urea, 6M guanidine hydrochloride |
| <b>Temperature resistance</b> | 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.

### 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: Product name SP Persedex C-50

| Product Code in Catalogue | Product Volume |
|---------------------------|----------------|
| 268-00025                 | 25 g           |
| 268-00100                 | 100 g          |
| 268-00500                 | 500 g          |
| 268-01000                 | 1 kg           |
| 268-05000                 | 5 kg           |
| 268-10000                 | 10 kg          |

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