LT BIOTECH UAB
Mokslininkų g. 6A,
LT-08412 Vilnius,
Lithuania
www.ltbiotech.lt

Persecryl S-200

1. Basic product information

Persecryl S-200 chromatography resin has a unique chemical structure, good physical and chemical properties, high flow rate during column chromatography operation, and high resolution and recovery. It is an indispensable type of hydrophilic gel filtration chromatography resin in the separation and purification technology of biological macromolecules such as enzymes, polysaccharides, nucleic acids and proteins. This type of chromatography resin is used in the production of biological products such as interferon-γ, interleukin 2, protein A and hepatitis B vaccine.

2. Chromatography resin parameters

Matrix	Cross-linked copolymer of acrylic anhydride and N-N methylenebis sulfonamide
Particle size	25–75 μm
Separation range	5–250 kDa
Recommended flow rate	⩾150 cm/h (at 1 bar)
Maximum working pressure	2 bar

3. Chemical resistance

pH stability*	3~11 (working range), 2~13 (CIP)
Chemical stability	All commonly used aqueous buffers: 0.2M NaOH; 0.1M HCl; 1M acetic acid; 8M urea; 6M guanidine hydrochloride; 1% SDS; 20% ethanol; 30% propanol; 30% acetonitrile; 2M NaCl

** The physical and chemical properties and functions of the chromatographic resin have no obvious changes after being placed in an environment of 40°C and pH2–13 for 7 days.*

4. Method of use

4.1 Chromatographic conditions
(1) Buffer selection: the stability of the sample in the buffer should be considered; to avoid possible non-specific adsorption, it is advisable to use a salt-containing buffer instead of ultra pure or pure water.
(2) Flow rate: according to the height of the column bed, a linear flow rate must be selected so as not to exceed the maximum possible working pressure.
(3) Sample pretreatment: to prevent the sample from clogging the column, it needs to be filtered with a 0.45 μm microporous membrane before loading.
4.2 Chromatography steps
(1) Equilibration: use the buffer to fully equilibrate the chromatography column until the pH and conductivity are stable and basically the same as the equilibration buffer. This step usually requires 2–5 column bed volumes (CV).
(2) Sample loading: the usual loading volume is 1%–2% of the column volume, and the sample concentration should not be too high, to avoid overpressure or affecting the resolution.
(3) Elution: use buffer elution to collect peaks at different positions, usually 1~1.5 CV.

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(4) Regeneration: rinse the column with a buffer containing high salt (such as 1M NaCl).
(5) Re-equilibration: re-equilibrate the column with buffer.

5. Cleaning and regeneration

Generally, washing with buffer solution will bring back balance and it can be used again. Some inactivated proteins or lipids cannot be washed out during regeneration and can be removed by cleaning-in-place (CIP).

CIP

Lipids, inactivated proteins and precipitates can be cleaned with 0.2–0.5M NaOH or non-ionic detergent first, with a flow rate of 15–20 cm/h, and then washed with an equilibration buffer solution of 2 CV. The entire cleaning process takes about 1~2 hours, depending on the specific usage.

6. 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.

7. Destruction and recycling

Since chromatography resin is difficult to degrade in nature, it is recommended that the discarded 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, follow the local biosafety requirements before destroying or disposing of it.

8. Packing method

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

9. Ordering information

Product name: Persecryl S-200

Product Cat. No	Package
200-00025	25 ml
200-00100	100 ml
200-00500	500 ml
200-01000	1 L
200-05000	5 L
200-10000	10 L