

HiTrap SP HP column

Product Information

Cat#No# Hi-239P

Product Overview

HiTrap SP HP is a strong cation exchange chromatography column for high-resolution, small-scale protein purification.

Characteristic

Packed with SP Sepharose High Performance strong cation exchange resin .

Small (34 µm) bead size delivers high-performance, high-resolution purifications.

Can be used alone or connected in series.

Convenient HiTrap format: designed for use with a syringe, peristaltic pump, or chromatography system.

Maximum operating pressure

5 bar [0.5 MPa] (70 psi)

Sample preparation

The sample should be adjusted to the composition of the start buffer by buffer exchange using HiTrap Desalting, HiPrep 26/10 Desalting or PD-10 columns, see Table 5. The sample should be filtered through a 0.45 µm filter or centrifuged immediately before it is applied to the column.

Metal ion capacity

0.15 to 0.20 mmol H⁺/mL resin

Matrix

Cross-linked agarose, spherical

Average particle size

~ 34 µm

Dynamic binding capacity

~ 55 mg ribonuclease/mL resin

Recommended flow rate

HiTrap SP HP column

1 mL/min

Recommended column height

25 mm

Chemical stability

Stable to commonly used aqueous buffers, 1.0 M NaOH, 1.0 M acetic acid, 8 M urea, 6 M guanidine hydrochloride, 30% isopropanol, and 70% ethanol.

pH working range

4 to 13

CIP stability

3 to 14

Storage

4 to 30°C, 0.2 M Sodium Acetate in 20% Ethanol

Purification procedures

1. Fill the syringe or pump tubing with start buffer (low ionic strength). Remove the stopper and connect the column to the syringe (with the provided connector), or pump tubing, "drop to drop" to avoid introducing air into the column.
2. Remove the snap-off end at the column outlet.
3. Wash out the preservatives with 5 column volumes of start buffer, at 1 mL/min for HiTrap 1 mL and 5 mL/min for HiTrap 5 mL.
4. Wash with 5 column volumes of elution buffer (start buffer with 1 M NaCl).
5. Finally equilibrate with 5 to 10 column volumes of start buffer.
6. Apply the sample at 1 mL/min for HiTrap 1 mL and 5 mL/min for HiTrap 5 mL using a syringe fitted to the luer connector or by pumping it onto the column.
7. Wash with at least 5 column volumes of start buffer or until no material appears in the eluate.
8. Elute with 5 to 10 column volumes of elution buffer, see "Choice of gradient type".
9. The purified eluted fractions can be desalted using a HiTrap Desalting, HiPrep 26/10 Desalting or a PD-10 column if necessary.

HiTrap SP HP column

10. After completed elution, regenerate the column by washing with 5 column volumes of regeneration buffer (start buffer with 1 M NaCl) followed by 5 to 10 columns volumes of start buffer. The column is now ready for a new sample.

Pack size

5 × 1 mL

Maximum flow velocity

4 mL/min

Dimensions

7 × 25 mm

Column volume

1 mL

Column i.d.

7 mm

Column hardware pressure limit

0.5 MPa (5 bar, 72.5 psi)

Functional group

– CH₂CH₂CH₂SO₃
