

## HiTrap SP XL

### Product Information

**Cat#No#** Hi-241P

#### Product Overview

HiTrap SP XL are strong cation exchangers prepacked with SP Sepharose XL media, optimized for fast, convenient small-scale protein capture using ion exchange (IEX) chromatography.

#### Description

Q Sepharose XL and SP Sepharose XL resins have long chains of dextran coupled to a robust, 6% highly cross-linked agarose matrix. The dextran chains increase the exposure of the Q or SP charged groups, which results in very high loading capacities.

#### Characteristic

High binding capacities with high flow rates.

Convenient and affordable for fast, easy separations either alone or connected in series.

Designed for use with syringe, peristaltic pump, or chromatography system.

#### Maximum operating pressure

5 bar [0.5 MPa] (70 psi)

#### Metal ion capacity

0.18–0.25 mmol H+/ mL resin

#### Matrix

Cross-linked agarose, with dextran surface extender, spherical

#### Ionic Exchanger Type

Strong cation

#### Average particle size

~ 90 µm

#### Dynamic binding capacity

≥ 160 mg Lysozyme/ mL resin

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**Recommended flow rate**

1 mL/min

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**Recommended column height**

25 mm

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**Chemical stability**

Stable to commonly used aqueous buffers, 1.0 M NaOH, 8 M urea, 20% ethanol, 6 M guanidine hydrochloride, 70% ethanol.

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**pH working range**

4 to 13

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**CIP stability**

3 to 14

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**Storage**

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

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**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 desalting using a HiTrap Desalting, HiPrep 26/10 Desalting or a PD-10

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column if necessary.

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.

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**Pack size**

5 × 1 mL

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**Maximum flow velocity**

4 mL/min resp. 20 mL/min

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**Dimensions**

7 × 25 mm

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**Column volume**

1 mL

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**Column i.d.**

7 mm

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**Column hardware pressure limit**

5 bar (0.5 MPa, 72 psi)

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**Functional group**

-CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>SO<sub>3</sub>-