

HiScreen Capto Q Impres column

Product Information

Cat#No# Hi-215P

Product Overview

HiScreen Capto Q ImpRes column is packed with a strong anion exchange modern resin for fast, high-resolution protein purification in process development.

Characteristic

Prepacked with Capto Q strong anion exchange chromatography resin.

Convenient method optimization and parameter screening enabled by the 10 cm bed height.

These columns are easily connected in series to increase bed height to 20 cm.

Fast results and minimal sample and buffer consumption achieved through the small bed volume.

BioProcess columns packed with the same chromatography resin and using the same linear fluid velocity can produce scalable, reproducible results.

Maximum operating pressure

4 bar [0.4 MPa] (59 psi)

Sample preparation

1. Adjust the sample to the composition of the start buffer, using one of these methods: Dilute the sample with start buffer. Exchange buffer using a HiPrep 26/10 Desalting, HiTrap Desalting or PD-10 Desalting column.
2. Filter the sample through a 0.45 µm filter or centrifuge at 10 000 × g for 10 min immediately before loading it to the column. This prevents clogging and increases the life time of the column when loading large sample volumes.

Metal ion capacity

0.15 to 0.18 mmol Cl⁻ /ml medium

Matrix

High flow agarose

Particle Size

36 to 44 µm

HiScreen Capto Q Impres column

Dynamic binding capacity

>55 mg BSA/ml medium; >48 mg β -Lactoglobulin/ml medium.

Recommended flow rate

100 to 300 cm/h

Recommended column height

100 mm

Chemical stability

All commonly used aqueous buffers, 1 M NaOH, 5 M urea, 6 M guanidine hydrochloride, 30% isopropanol and 70% ethanol.

pH working range

2 to 12

CIP stability

2 to 14

Storage

4 to 30°C, in 20% Ethanol

Elution buffer

20 mM Tris-HCl, 1 M NaCl, pH 8.0.

Cleaning-in-place

1. Wash with at least 2 column volumes (CV) of 2.0 M NaCl.
2. Wash with at least 4 CV 1.0 M NaOH.
3. Wash with at least 2 CV 2.0 M NaCl.
4. Wash with at least 2 CV ultra pure water.
5. Wash with Capto DEAE At least 10 CV start buffer or until eluent pH and conductivity have reached the required values.

Purification procedures

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1. Remove the stoppers and connect the column to the system. Avoid introducing air into the column.
2. Wash with 1 column volume (CV) distilled water. This step removes the ethanol and avoids the precipitation of buffer salts upon exposure to ethanol. The step can be omitted if precipitation is not likely to be a problem.
3. Equilibrate the column with at least 5 CV start buffer or until the UV baseline, eluent pH and conductivity are stable.
4. Adjust the sample to the chosen starting pH and conductivity and load on the column.
5. Wash with 5 to 10 CV start buffer or until the UV trace of the effluent returns to near baseline.
6. Elute, either by linear gradient elution or a step elution, see below. If required, the collected eluted fractions can be buffer exchanged or desalted.
7. Wash with 5 CV of 1 M NaCl (100% elution buffer) to elute any remaining ionically bound material.
8. If required, perform a CIP to clean the column.
9. Re-equilibrate with 5 to 10 CV start buffer or until the UV baseline, eluent pH, and conductivity reach the required values.

Pack size

1 × 4.7 mL

Maximum flow velocity

400 cm/h

Dimensions

7.7 × 100 mm

Column volume

4.7 mL

Column i.d.

7.7 mm

Column hardware pressure limit

0.8 MPa (8 bar, 116 psi)

Functional group

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-CH₂N + (CH₃)₃
