

ReadyToProcess IMAC Sepharose 6 Fast Flow columns

Product Information

Cat#No# Re-089P

Product Overview

Chromatography columns prepacked with IMAC Sepharose 6 Fast Flow, an uncharged IMAC resin for purifying proteins and peptides with affinity for metal ions.

Description

Immobilized metal ion affinity chromatography (IMAC) is a widely used separation method for purifying proteins and peptides that have an affinity for metal ions, such as histidine-tagged proteins but also some untagged recombinant or native proteins.

IMAC Sepharose 6 Fast Flow is supplied free of metal ions, allowing the user to charge it with the most appropriate metal ion for purification of a target protein.

Characteristic

Prepacked and ready-to-use: validated high-performance columns supplied prepacked and ready for use in bioprocessing.

Supplied uncharged: for customized metal ion charging and optimized selectivity.

For purification of histidine-tagged (his-tagged) proteins: select when nickel has been shown to not be the best choice of metal ion. High chemical stability: enables proven cleaning-in-place and sanitization protocols.

Hydrophilic base matrix: ensures low levels of nonspecific binding and low levels of host cell-derived impurities in the elution pool. Resin fulfills industrial demands: for security of supply, robust performance, and regulatory support.

Maximum operating pressure

1.2 bar (0.12 MPa, 17 psi)

Metal ion capacity

Approx. 15 $\mu\text{mol Ni}^{2+}$ /mL medium

Matrix

Highly cross-linked 6% spherical agarose

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Flow columns

Average particle size

90 µm

Dynamic binding capacity

(Histidine)6 -tagged: Approx. 40 mg/mL medium (Ni²⁺-charged)

Untagged: Approx. 25 mg/mL medium (Cu²⁺-charged), approx. 15 mg/mL medium (Zn²⁺ or Ni²⁺-charged)

Recommended column height

200 mm (7.87 in)

Chemical stability

0.01 M HCl, 0.1 M NaOH. Tested for 1 week at 40°C. 1 M NaOH, 70% acetic acid. Tested for 12 h. 2% SDS. Tested for 1 h. 30% 2-propanol. Tested for 30 min.

pH working range

3 to 12

CIP stability

2 to 14

Storage

4°C to 30°C, 20% ethanol

Elution

Elution is performed by reducing the pH or by competitive displacement, using for example imidazole. The most frequently used elution procedure for histidine-tagged proteins is based on a linear or stepwise increase of the imidazole concentration.

Elution by reducing pH can be performed using a linear or stepwise gradient. Most untagged proteins can be eluted between pH 6 and 4. Prepacked HiTrap IMAC FF columns are an excellent choice for screening to establish the optimal chromatographic conditions

Pack size

1 L

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Maximum flow velocity

600 cm/h (20 mL/min) using XK 16/20 columns with 5 cm bed height.

Dimensions

80 × 200 mm

Column volume

1 L

Column i.d.

80 mm

Column hardware pressure limit

5 bar (0.5 MPa, 72 psi)
