

Chromalite® SpectraChrom KIT

Methacrylic Resins, Screening
KIT for Affinity His-Tag
Immobilization and Purification

If you work in the purification and separation of His-tagged proteins, then discover our IMAC resin range Chromalite MIDA. Metal affinity chromatography resin designed to selectively capture His-tagged enzymes for biocatalytic and chromatographic processes.

About Chromalite MIDA

Chromalite MIDA is an IMAC (immobilized metal affinity chromatography) high-performance media for high-capacity purification of His-tagged enzymes for biocatalytic processes. The resins are loaded with metals that show a high affinity for His-tag proteins. The resins come loaded with the following metals:

- Nickel
- Iron
- Copper
- Cobalt
- Zinc

This new range of IDA resins provides high His-tagged enzyme selectivity and stability. Depending on the His-tag position on the protein, this enzyme would be more flexible than other immobilization techniques and can be orientated at the time of immobilization. Additionally, the resin can be regenerated after enzyme activity exhaustion.

Properties

- Methacrylic, hydrophilic and macroporous resin
- Rigid polymeric backbone
- Robust matrix, highly porous for enzymes/proteins
- Iminodiacetic acid (IDA) functional groups allowing metal loadings of 0.25 mmol metal/g

Applications

His-tagged protein purification can be used as the only purification step for applications that do not require proteins with extremely high purity. Suitable for large-scale applications, protein isolation of specific protein fractions from fermentation broth or protein mixtures.

Performance

Studies were conducted on the performance of Chromalite MIDA in the immobilization of ketoreductase.

Recycling studies:

A key feature for industrial applications, the findings show the binding of metals to Chromalite MIDA is strong, there is no leaching of metal and

demonstrated excellent stability over 10 cycles.

Metal loading:

It was found that a hydrophilic backbone works better for enzyme immobilization. In comparison to a standard chelating resin, Chromalite MIDA achieved high enzyme activity from a much lower metal capacity.

These experiments showed that the His-tag immobilization provides an increase of up to 4x in specific activity compared to standard immobilizations, directly related to the selectivity of the Chromalite MIDA resin.

Performance advantages:

- Shorter immobilization time (2h vs 24h)
- Less enzyme required
- Recycling with no loss of activity
- No metal leaching
- Single immobilization/purification step

Resin screening KIT for affinity His-Tag immobilization and enzyme purification

The SpectraChrom KIT includes 6 different resins, which enables you to perform rapid screening during enzyme purification or immobilization by metal affinity. This new range of IDA resins increases the potential use of a wide range of His-tagged enzymes in the manufacture of key compounds while minimizing the downstream processing cost by combining purification and immobilization in one simple step.

The kit includes 25ml of each resin:

- Chromalite MIDA/M/Ni
- Chromalite MIDA/M/Co
- Chromalite MIDA/M/Zn
- Chromalite MIDA/M/Cu
- Chromalite MIDA/M/Fe
- Chromalite MIDA/M

SISTEMI

- Idoneo per configurazioni in batch e in colonna

IMBALLI TIPICI

- Scatola di presentazione

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Aspetto	Different Colours
Gruppo funzionale	Iminodiacetic with metal
Fornito come	Wet
Conservazione/Stoccaggio consigliato	2 - 20 °C
Distribuzione granulometrica	75 - 125 µm

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