

## PureCube 100 INDIGO Ni-Cartridge 1 mL & 5 mL

Product	Catalog No.	Package size
PureCube 100 INDIGO Ni-Cartridge (1 x 1 mL)	75301	1 x 1 mL prepacked column
PureCube 100 INDIGO Ni-Cartridge (5 x 1 mL)	75303	5 x 1 mL prepacked columns
PureCube 100 INDIGO Ni-Cartridge (1 x 5 mL)	75305	1 x 5 mL prepacked column
PureCube 100 INDIGO Ni-Cartridge (5 x 5 mL)	75307	5 x 5 mL prepacked columns

### Product Description

The PureCube 100 INDIGO Ni-Cartridge is a chromatography column prepacked with PureCube 100 INDIGO Ni-Agarose. The column is stored in buffer containing 20% ethanol to prevent microbial growth. The PureCube 100 INDIGO Ni-Cartridge is available in two sizes, 1 mL bed volume and 5 mL bed volume (dimensions given in Product Specifications). Both column sizes exhibit excellent chemical resistance to most commonly used reagents and the End Plugs include standard connections compatible with common chromatography instruments (FPLC). The 5 mL column has two layers of mesh (coarse and fine) at one end to give excellent flow distribution. The void volume in each End Plug is minimal, because the fluid is introduced through a narrow flow path (i.e. 1 mm hole).

### Product Specifications

Parameter	PureCube 100 INDIGO Ni-Cartridge, 1 mL	PureCube 100 INDIGO Ni-Cartridge, 5 mL
Technology	His affinity chromatography	His affinity chromatography
Functional Group	Proprietary	Proprietary
Format	1 mL	5 mL
Dimensions	6.2 x 50	11 x 80
Column Body Material	Polypropylene	Acrylate
End Plug Material	Polypropylene	Polypropylene
Inlet/Outlet	10-32 UNF female thread	10-32 UNF female thread
Matrix	6% highly cross-linked agarose	6% highly cross-linked agarose
Particle Diameter	50-150 µm	50-150 µm
Protein Binding Capacity*	Up to 80 mg	Up to 400 mg
Max. Flow Rate	6 mL/min	6 mL/min
Recommended Flow Rate**	0.5-2.0 mL/min	0.5-2.0 mL/min
Recommended Operational Pressure	Up to 5 bar (72 psi)	Up to 3 bar (42 psi)
pH Stability	4-9	4-9

\* Protein binding capacity can vary for different proteins

\*\* Dynamic binding capacity strongly correlates with the flow rate and other parameters such as protein size and buffer conditions

## Affinity Resin

PureCube 100 INDIGO Ni-Agarose was developed for the affinity purification of proteins carrying a polyhistidine tag. This affinity chromatography matrix is based on a highly cross-linked, 6% agarose. The material is highly porous to allow for optimal protein interaction. PureCube 100 Agarose is also physically very stable, making it suitable for purification processes under low pressure with variable flow rates. The diameter of the beads is 50-150  $\mu\text{m}$ , providing excellent flow behavior and a high degree of reproducibility between individual purification runs.

The novel, proprietary INDIGO ligand is coupled to PureCube 100 Agarose and carefully loaded with nickel ions to obtain a matrix with highest binding capacity for histidine residues. This novel matrix tolerates purification buffers of up to 20 mM EDTA and 20 mM DTT with no loss in performance. The metal ion capacity is about 15  $\mu\text{eqv Ni}^{2+}/\text{mL}$ . Nickel ions cannot be released from the ligand. PureCube INDIGO Co-Agarose is available on request.

## Protein Binding Capacity

PureCube 100 INDIGO Ni-Cartridges have a binding capacity of up to 80 mg/mL as determined by purification of 6xHis-tagged GFP protein from *E.coli* cleared lysates, and quantified via spectrophotometry. It should be considered that the dynamic binding capacity strongly correlates with flow rate and other parameters such as protein size and buffer conditions. It is recommended to use the lowest flow rate possible to achieve highest binding capacity.

## Compatibility

PureCube INDIGO Ni- 100 Agarose can resist the following conditions in most situations: 100% methanol, 100% ethanol, 8 M urea, 6 M guanidinium hydrochloride, 30% (v/v) acetonitrile, up to 20 mM EDTA and up to 20 mM DTT, **pH 4-9. Note that the material is not stable at extreme pH, e.g., in the presence of NaOH.**

## Shipping and Storage

Parameter	PureCube 100 INDIGO Ni-Cartridge, 1 mL	PureCube 100 INDIGO Ni-Cartridge, 5 mL
Long-term Stability	3 years after shipment	3 years after shipment
Shipment Temperature	Ambient temperature	Ambient temperature
Storage Buffer	20% ethanol, pH 6.5	20% ethanol, pH 6.5
Storage Temperature	2-8 °C	2-8 °C

## Additional Information

For protein purification protocols, including protocols for packing chromatography columns or regenerating PureCube 100 INDIGO Ni-Agarose, please visit our webpage at [www.cube-biotech.com/protocols](http://www.cube-biotech.com/protocols). For purification of his-tagged proteins from dilute solutions, we recommend using PureCube INDIGO Ni- MagBeads.

For affinity purification of GST-tagged, rho1D4-tagged or strep<sup>®</sup>-tagged proteins, Cube Biotech offers dedicated agarose resins, magnetic beads and prepacked cartridges. Also available are a range of ultrapure detergents and buffers for extraction and purification of proteins. See [www.cube-biotech.com/products](http://www.cube-biotech.com/products) for details.

**Disclaimer:** Our products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

Trademarks: FPLC<sup>®</sup> (GE Healthcare), Strep-tag<sup>®</sup> (IBA GmbH),

**Proteins are our passion.**