

PROTEIN PURIFICATION

Bio-Scale™ Mini Profinity™ IMAC Cartridges

- Excellent purity of target His-tagged proteins
- Convenient disposable prepacked 1 and 5 ml formats
- Innovative cartridge design for run-to-run reproducibility
- Luer-Lok fittings for easy connection to liquid chromatography systems or syringes

Fast, Reliable Purification of His-Tagged Proteins

Prepacked Cartridges for His-Tagged Protein Purification

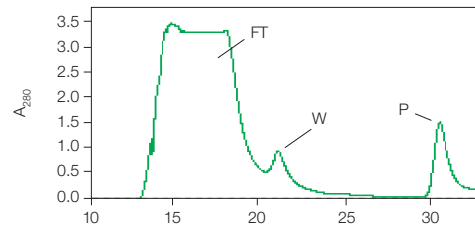
Bio-Rad's innovative Profinity IMAC support delivers high-yield purification of histidine (His)-tagged proteins, and now is available in convenient 1 and 5 ml Bio-Scale Mini cartridges. These prepacked disposable cartridges are delivered ready to use and are easy to connect with simple luer fittings. The cartridges use a patent-pending double-wall construction coupled with an innovative compression packing technique that creates reproducible, well-packed columns. Together, the support and the prepacked cartridge provide impressive purity results and exceptional convenience (Figure 1).

High-Purity Resin

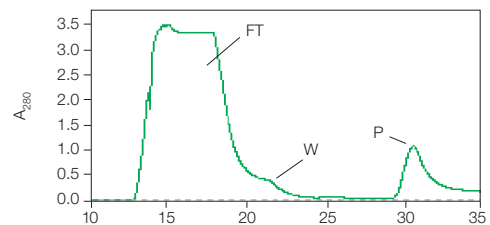
Profinity IMAC resins yield high purity of target His-tagged protein, run after run, because they have an optimized ligand density and open pore structure that are highly selective for recombinant His-tagged proteins over a wide molecular weight range.



Bio-Scale Mini Profinity IMAC cartridge



Supplier A cartridge 1



Supplier A cartridge 2

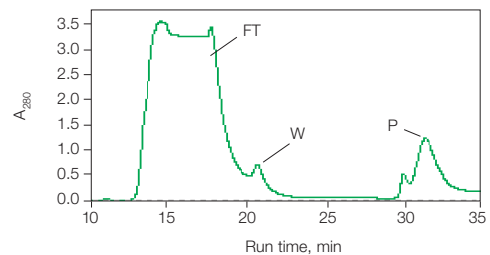


Fig. 1. Comparison of chromatographic separation using three different IMAC cartridges designed for His-tagged protein purification. His-tagged Nif3 (construct provided by Dr Ray Stevens, The Scripps Research Institute, USA) was purified through three commercially available IMAC cartridges. Note the sharp elution peak of the target protein (P) on the Bio-Scale Mini Profinity IMAC cartridge chromatogram compared to the results of the competitive cartridges. FT, flow-through; W, wash. For the complete data, request bulletin 5501 or go to www.bio-rad.com/cartridges/

BIO-RAD

Bio-Scale Mini Profinity IMAC Cartridges

Convenience

Bio-Scale Mini Profinity IMAC cartridges come in convenient prepacked sizes of 1 and 5 ml, and may be used for method scouting or rapid His-tagged protein purification. The prepacked cartridge format is an economical and time-saving alternative to gravity-flow and syringe-type columns.

Compatibility

Bio-Scale Mini cartridges' luer fittings are compatible with a wide range of low- and medium- pressure chromatography systems, such as the BioLogic™ LP, BioLogic DuoFlow™, and other chromatography systems. The cartridges also are compatible with aqueous buffers most commonly used for protein purification, and are suitable for use with peristaltic pumps and Luer-Lok syringes.

Rapid Downstream Purity Analysis

A target protein purity check is an important follow-up step to any His-tagged protein purification. Bio-Scale Mini Profinity IMAC cartridges' rapid delivery of purified target proteins may be confirmed with polyacrylamide gel electrophoresis or with the Experion™ automated electrophoresis system. The Experion system displays separation data in electropherograms and simulated gel images (Figure 2), automates separation, staining, and analysis, and accurately analyzes target protein purity in just 30 min.

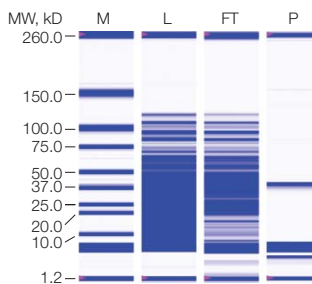
Specifications

Sizes (bed volume)	1 ml and 5 ml
Dimensions	1 ml — 40 mm length x 5.6 mm ID 5 ml — 40 mm length x 12.6 mm ID
Maximum pressure tolerance	45 psi
Recommended flow rates	1 ml — 1–2 ml/min (240–480 cm/hr) 5 ml — 5–10 ml/min (240–480 cm/hr)
Maximum flow rate	1 ml — 6 ml/min (1,440 cm/hr) 5 ml — 20 ml/min (963 cm/hr)
Dynamic binding capacity*	≥15 mg/ml
Fittings	Female luer inlet and male luer outlet
Column material	Polypropylene
Frit material	Polyethylene (HDPE)
Shipping conditions	20% ethanol
Recommended storage conditions	20% ethanol, 4–8°C
Autoclavability	Not autoclavable

* $Q_{10\%}$ determination of 1.8 mg/ml His-tagged pure protein (32 kD).

Note: Dynamic binding capacity will vary from protein to protein.

Simulated gel image



Electropherogram

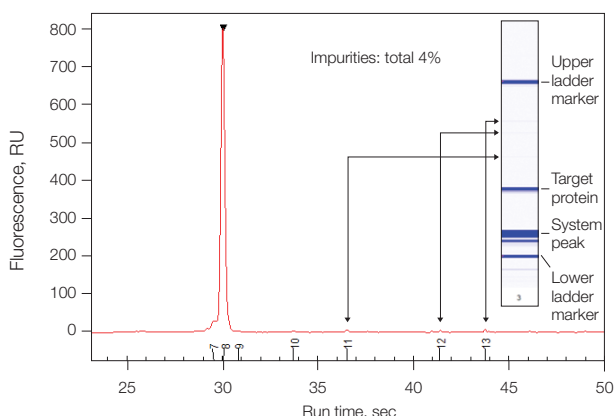


Fig. 2. Experion automated electrophoresis purity analysis of His-tagged Nif3 purified with a 1 ml Bio-Scale Mini Profinity IMAC cartridge. Upper panel, lanes contain standard (M, Experion Pro260 ladder) and the load (L), flow-through (FT), and eluted purified target protein (P) fractions. Lower panel, analysis of target protein fraction. Competitor cartridges 1 and 2 yielded total impurities of 9% and 8%, respectively.

Ordering Information

Catalog #	Description
Prepacked Bio-Scale Mini Cartridges	
732-4610	Bio-Scale Mini Profinity IMAC Cartridges, 5 x 1 ml
732-4612	Bio-Scale Mini Profinity IMAC Cartridge, 1 x 5 ml
732-4614	Bio-Scale Mini Profinity IMAC Cartridges, 5 x 5 ml
Fittings Kits	
732-0111	Luer to M6 Adaptor Fittings Kit , includes luer to M6 fittings to connect 1 cartridge to an FPLC system
732-0112	Luer to 10-32 Adaptor Fittings Kit , includes luer to 10-32 fittings to connect 1 cartridge to an HPLC system
732-0113	Luer to BioLogic System Fittings Kit , 1/4–28 female to male luer and 1/4–28 female to female luer to connect 1 cartridge to a BioLogic DuoFlow system

To learn more, request bulletin 5501 or, to see the current selection of prepacked cartridges, visit us on the Web at www.bio-rad.com/cartridges/

Luer-Lok is a trademark of Becton, Dickinson and Company.



**Bio-Rad
Laboratories, Inc.**

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Group

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