



CHROMATOGRAPHY

UNOsphere SUPrA™ Affinity Chromatography Media

- Reliable performance and high productivity
- High binding capacity at a wide range of linear velocities and bed heights
- Built on the proven UNOsphere media matrix
- Superior flow properties
- Flexible yet predictable for day-to-day ease of use
- Narrow elution profile reduces volume of buffer required

Expand Your Purification Options for Monoclonal Antibodies with UNOsphere SUPrA Affinity Media

UNOsphere SUPrA affinity media are designed for process-scale purification of monoclonal and polyclonal antibodies. These affinity media are built on the proven UNOsphere matrix for predictable performance over a wide range of antibody concentrations.

Fast Flow at Low Pressure

With UNOsphere SUPrA media, higher bed heights can be used to increase residence time without excessive pressure increases, providing developers with a large window of operational freedom.

Robust and Easily Scalable

The UNOsphere™ products are used in numerous approved purification processes and continue to be dependable media among process developers. Users can confidently scale their processes by changing the flow rate and bed height without compromising binding capacity. UNOsphere SUPrA media typically provide >95% recovery of target antibodies. UNOsphere SUPrA affinity chromatography media are available in a variety of quantities in bulk and in prepacked formats for screening.

UNOsphere SUPrA Media Are Part of a Powerful Workflow Solution

When used with UNOsphere Q support and CHT™ ceramic hydroxyapatite, UNOsphere SUPrA media form an efficient mAb purification workflow that delivers high purity antibody and excellent host cell protein removal and DNA clearance.

UNOsphere SUPrA Affinity Media Specifications

Composition	Highly cross-linked polymer
Particle size range	53–61 μm
Ligand	Recombinant protein A
Coupling chemistry	Epoxy
Working pH range	3–11

Dynamic Binding Capacity*

30 ± 3 mg/ml at 150 cm/hr
 25 ± 2 mg/ml at 300 cm/hr
 20 ± 2 mg/ml at 450 cm/hr
 (Minimum spec: 20 mg/ml at 300 cm/hr)

Chemical Stability**

10 mM hydrochloric acid
 6 M guanidine hydrochloride
 0.1 M arginine (pH 2.8)
 0.1 M citrate (pH 2.8)
 0.1 M glycine (pH 2.8)

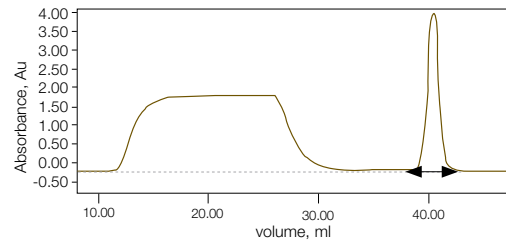
Cleaning-In-Place (CIP) Solutions

6 M guanidine hydrochloride
 10 mM hydrochloric acid
 0.1 M sodium hydroxide
 1 M acetic acid/20% ethanol

Recommended mobile phase velocity range	100–600 cm/hr
Temperature stability	2–40 °C
Delivery conditions	50% slurry in 20% ethanol
Storage conditions	2–8 °C

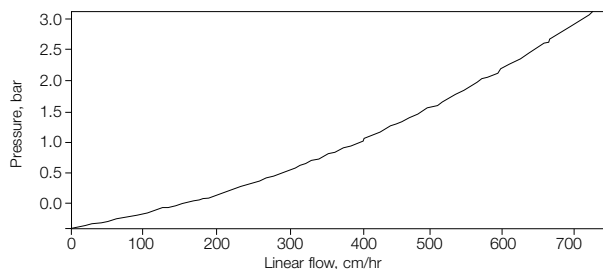
* 10% breakthrough capacity determined with 1.0 mg/ml polyclonal human IgG in 1.1 x 10 cm column.

** No significant change in chromatographic performance after storage for 24 hr at room temperature.

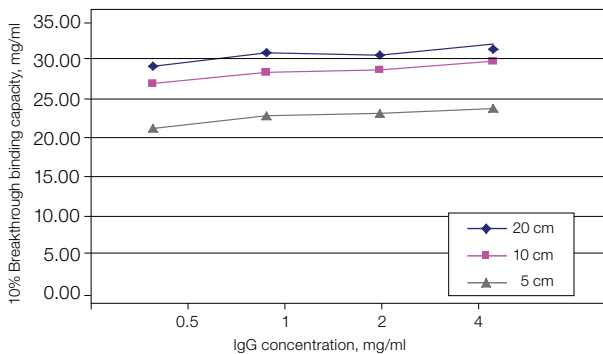


Narrow elution profile of antibody on UNOsphere SUPrA media.

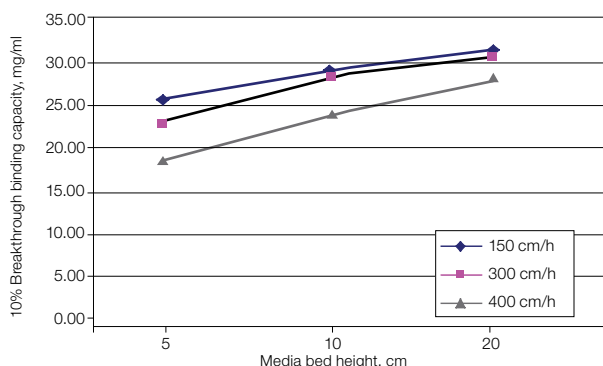




Flow performance of UNOsphere SUPrA media in Bio-Rad® InPlace™ column (20 x 20 cm). 13% axial compression.

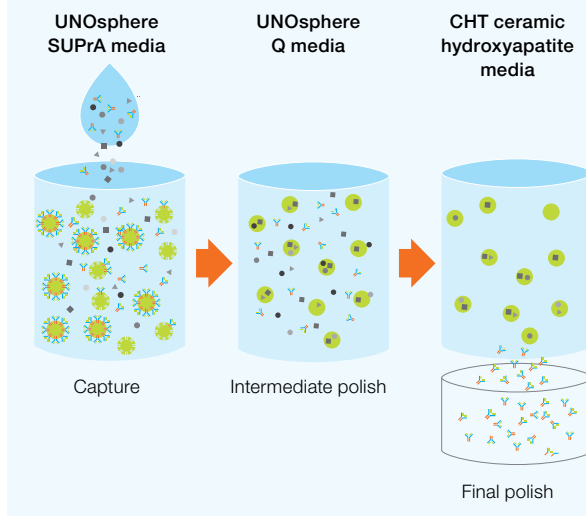


Dynamic binding capacities at increasing protein concentrations for various column heights at a linear velocity of 300 cm/hr.



Dynamic binding capacities at various bed heights and flow rates.

mAb Purification Workflow



MAb1*

HCP = 175 ng/mg	HCP < 3 ng/mg	HCP < 2 ng/mg
DNA = 18.6 ng/mg	DNA = 3.5 ng/mg	DNA = 2.5 ng/mg
Protein A = 3 ng/mg	Protein A = 0.8 ng/mg	Protein A < 0.7 ng/mg

*Chimeric IgG1

Applications and Regulatory Support

Regulatory support files and applications notes are available upon request. Bio-Rad Laboratories is an ISO 9001 registered corporation.

For more information about Bio-Rad's complete line of process chromatography solutions, please visit us at www.bio-rad.com/UNOsphere/.

Ordering Information

Catalog #	Description
156-0218	UNOsphere SUPrA affinity chromatography media, 25 ml
156-0219	UNOsphere SUPrA affinity chromatography media, 100 ml
156-0220	UNOsphere SUPrA affinity chromatography media, 500 ml
156-0221	UNOsphere SUPrA affinity chromatography media, 5 L
156-0222	UNOsphere SUPrA affinity chromatography media, 10 L
732-4200	Bio-Scale™ Mini cartridges prepacked with UNOsphere SUPrA media, 1 x 1 ml
732-4201	Bio-Scale Mini cartridges prepacked with UNOsphere SUPrA media, 5 x 1ml
732-4202	Bio-Scale Mini cartridges prepacked with UNOsphere SUPrA media, 1 x 5 ml

Larger volumes and special packaging are available on request; please contact your local Bio-Rad representative to discuss your requirements.

BIO-RAD

**Bio-Rad
Laboratories, Inc.**

Life Science
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