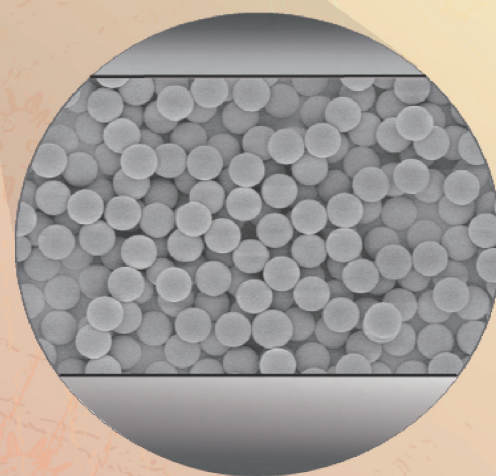


Hydrophobic Interaction Chromatography



Sepax Technologies

Proteomix[®] HIC



Better Surface Chemistry for Better Separation

SEPAX TECHNOLOGIES

Better Surface Chemistry for Better Separation

Sepax Technologies, Inc. is a Delaware, USA based leading chromatography product manufacturer and service provider specializing in biological separation areas. We offer unique ranges of HPLC columns for bioanalytical characterization and testing, as well as process media for downstream process and purification of MAb, BsMAb, ADC, Proteins, AAV, VLP, DNA, RNA, and various biologic samples. Sepax has a full portfolio of bead technology platforms, linker and organic synthesis chemistry, as well as protein chemistry in different stages of R&D and production pipelines to support the various needs of the biopharmaceutical industry and our customers. Certified to ISO 9001:2015 standards, Sepax focuses on customer & market needs, and is continuing to expand its presence and supply chain around the globe.

SPECIALIZED AND INNOVATIVE CHROMATOGRAPHY EXPERT



Sepax develops and manufactures a wide range of biological separation products using both silica and polymeric resins as the support. The selection of particle size is from 1 μm to 100 μm and pore size is from non-porous to 2000 \AA . Available Sepax column dimensions are 2.1, 4.6, 7.8, 10, 21.2, 30, and 50 mm I.D., and 50, 100, 150, 250, and 300 mm length. Sepax also offers custom-made columns. Both stainless steel and PEEK tubing are available. Unique and proprietary resin synthesis and surface technologies have been developed for solving separation challenges in the area of biologics.

Size Exclusion
SRT, SRT-C
Nanofilm
Zenix, Zenix-C
Biomix

Ion Exchange
Proteomix IEX
Antibodix

Reversed Phase
Proteomix RP
Bio-C4
Bio-C8
Bio-C18

Affinity
ProAqa Excel Protein A
Monomix dT20

Hydrophobic Interaction
Proteomix HIC

Analytical, Semi-prep and Preparative

Proteomix[®] HIC Phases

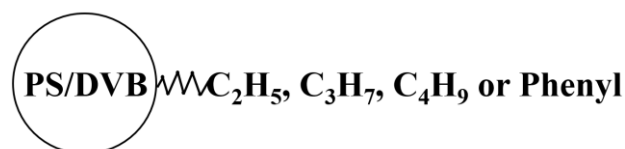
Polymer Based Hydrophobic Interaction Chromatography Media and Column

General Description

Proteomix[®] HIC columns are specially designed for high resolution and high efficiency separations of proteins, monoclonal antibodies (mAbs), antibody drug conjugates (ADCs), oligonucleotides and peptides via a hydrophobic interaction chromatography (HIC) mechanism. Utilizing proprietary surface technologies, Proteomix[®] HIC-NP resin is made of non-porous polystyrene divinylbenzene (PS/DVB) beads with narrow-dispersed particle size distribution. The PS/DVB bead is modified with alkyl groups or aryl groups that provide hydrophobic interaction with analytes (Figure 1).

Proteomix[®] HIC-NP resin is highly rigid and mechanically stable. In comparison to silica-based HIC phase media, Proteomix[®] HIC-NP phases have advantages for biomolecule separations with a wide pH range (2-12) and high chemical stability. The nonporous structure and unique chemistry, and narrow particle distribution offer special selectivity, high-resolution separation of proteins such as mAb, ADC and related protein fragments, DNA, and oligonucleotides. Proteomix[®] HIC-NP media is applicable for laboratory discovery, laboratory-scale purification, and preparative chromatography for the production of several milligrams to grams of proteins. Sepax also provides polymethacrylate-based Generik MC, Polar MC and Monomix MC HIC 30, 60 µm media which are designed for process-scale purification applications from grams to kilograms of proteins and biomolecules.

Figure 1. Structure of Proteomix[®] HIC resin



Featured Characteristics

- Highest capacity and resolution
- High protein recovery with intact biological activity
- High stability and lot-to-lot reproducibility
- High pressure and high temperature tolerance
- Ideal for separation and analysis of hydrophobic proteins, monoclonal antibodies, and their derivatives such as antibody drug conjugates and bispecific antibodies, and organic molecules derivatized with polymer branches

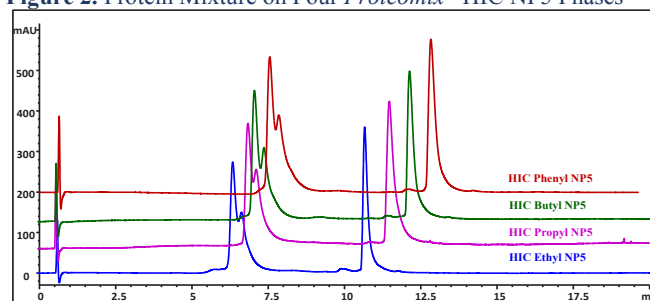
Technical Specifications

Resin Matrix:	Spherical, Highly Cross-Linked PS/DVB
Pore Size:	Nonporous
Particle Size:	1.7 and 5 µm
Phase Structure:	Ethyl, Propyl, Butyl, Phenyl
Separation Mechanism:	Hydrophobic Interaction
pH Stability:	2-12
Operating Temperature:	Up to 80 °C
Operating Pressure Limit:	6000 psi (5 µm) 8000 psi (1.7 µm)
Mobile Phase Compatibility:	Compatible with aqueous solution, a mixture of water and acetonitrile, acetone, methanol, or THF.

Hydrophobicity Order of the four HIC NP phases

HIC Ethyl < Propyl < Butyl < Phenyl

Figure 2. Protein Mixture on Four Proteomix[®] HIC NP5 Phases

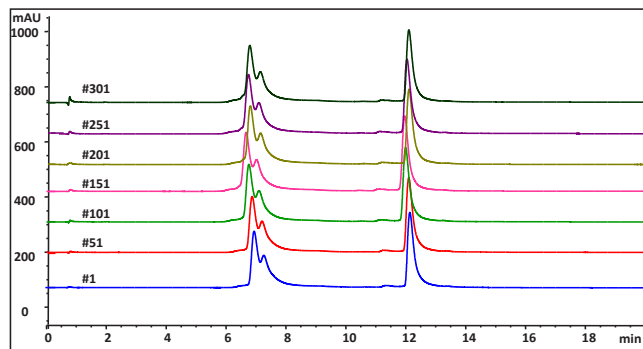


Column:	Proteomix [®] HIC NP5, 5 µm, 4.6 x 35 mm Phenyl, Butyl, Propyl and Ethyl phases
Flow Rate:	0.4 mL/min
Detector:	UV 214 nm
Temperature:	25 °C
Mobile Phase:	A: 2 M ammonium sulfate in 0.1 M sodium phosphate, pH 7.0 B: 0.1 M sodium phosphate, pH 7.0
Sample:	Ovalbumin 1.0 mg/mL Chymotrypsinogen 0.5 mg/mL
Injection:	4 µL

High Stability and Lot-to-Lot Reproducibility

Proteomix[®] HIC columns are based on PS/DVB resin and all the surface coatings are chemically bonded onto PS/DVB support, which allows exceptionally high stability, resulting in a high number of injections per column life. The columns are compatible with most aqueous buffers, such as ammonium sulfate, sodium acetate, phosphate, Tris as well as a mixture of water and acetone, methanol, acetonitrile and THF.

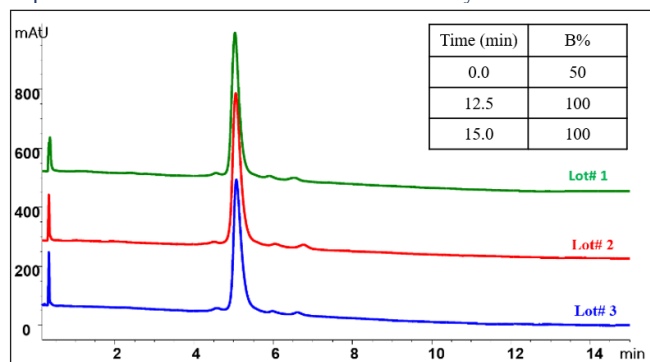
Figure 3. *Proteomix*[®] HIC Butyl-NP5 Life Time Test on Protein Mixture



Column: *Proteomix*[®] HIC Butyl NP5, 5 μ m, 4.6 x 35 mm
 Flow Rate: 0.4 mL/min
 Detector: UV 214 nm
 Temperature: 25 $^{\circ}$ C
 Mobile Phase: A: 2 M ammonium sulfate in 0.1 M sodium phosphate, pH 7.0
 B: 0.1 M sodium phosphate, pH 7.0
 Sample: Ovalbumin 1.0 mg/mL
 Chymotrypsinogen 0.5 mg/mL
 Injection: 4 μ L

With a well-controlled synthesis process of surface chemistry, *Proteomix*[®] HIC resin production is highly reproducible, leading to consistent column performance, thus, high lot-to-lot consistency on the separation of biomolecules like mAb, ADC, and proteins (Figures 4-6).

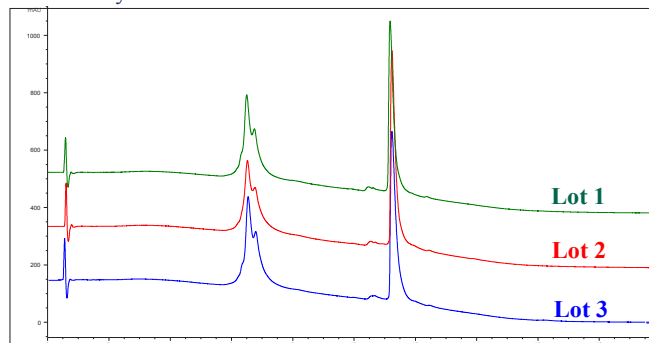
Figure 4. *Proteomix*[®] HIC Butyl NP5 for Rituximab-mAb Separation - Three Resin Lot to Lot Consistency



Column: *Proteomix*[®] HIC Butyl NP5, 5 μ m, 4.6 x 35 mm
 Flow Rate: 0.8 mL/min
 Detector: UV 214 nm
 Temperature: 25 $^{\circ}$ C

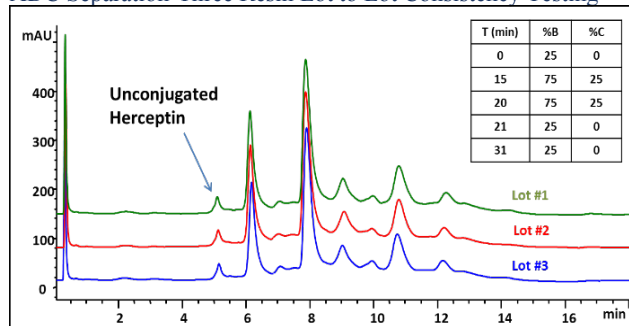
Mobile Phase: A: 2 M ammonium sulfate in 0.1 M sodium phosphate, pH 7.0
 B: 0.1 M sodium phosphate, pH 7.0
 Sample: Rituximab, 1.3 mg/mL dilute in water
 Injection: 4 μ L

Figure 5. *Proteomix*[®] HIC Butyl NP1.7 - Three Resin Lot to Lot Consistency Test on Protein Mixture



Column: *Proteomix*[®] HIC Butyl NP1.7, 1.7 μ m, 4.6 x 35 mm
 Flow Rate: 0.4 mL/min
 Detector: UV 214 nm
 Temperature: 25 $^{\circ}$ C
 Mobile Phase: A: 2 M ammonium sulfate in 0.1 M sodium phosphate, pH 7.0
 B: 0.1 M sodium phosphate, pH 7.0
 Gradient: 0-100% B in 15 min. 100% B 5 min
 Sample: Ovalbumin 1.0 mg/mL
 Chymotrypsinogen 0.5 mg/mL
 Injection: 4 μ L

Figure 6. *Proteomix*[®] HIC Butyl-NP5 for Herceptin-Cysteine ADC Separation-Three Resin Lot to Lot Consistency Testing

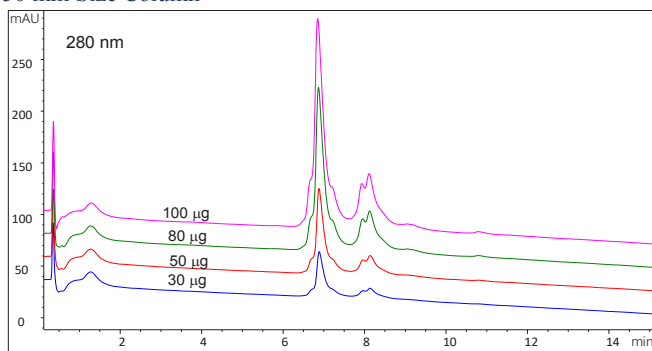


Column: *Proteomix*[®] HIC Butyl NP5, 5 μ m, 4.6 x 35 mm
 Flow Rate: 0.8 mL/min
 Detector: UV 214 nm
 Temperature: 25 $^{\circ}$ C
 Mobile Phase: A: 2 M ammonium sulfate in 0.025 M sodium phosphate, pH 7.0
 B: 0.025 M sodium phosphate, pH 7.0
 C: 100% IPA
 Sample: ADC, 1.0 mg/mL in 1.0 M ammonium sulfate
 Injection: 10 μ L

High Loading Capacity

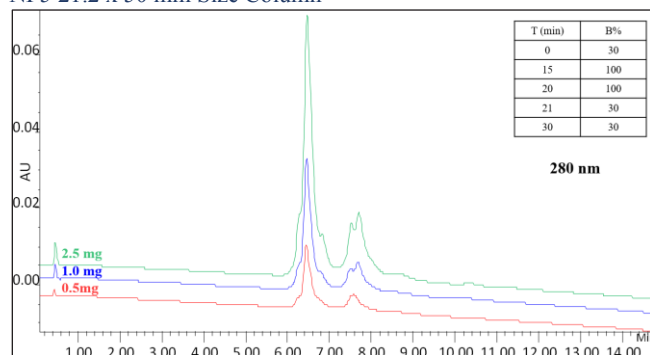
Loading Capacity is critical for hydrophobic interaction separation and purification. *Proteomix*[®] HIC columns have high loading capacity for biomolecules such as mAb (Figures 7-8).

Figure 7. MAb Loading Test on *Proteomix*[®] HIC Butyl NP5 4.6 x 50 mm Size Column



Column:	<i>Proteomix</i> [®] HIC Butyl NP5, 5 µm, 4.6 x 50 mm (0.83 mL resin)
Flow Rate:	1.0 mL/min
Detector:	UV 280 nm
Temperature:	25 °C
Col. Pressure:	105 bar
Mobile Phase:	A: 2 M ammonium sulfate in 0.1 M sodium phosphate, pH 7.0 B: 0.1 M sodium phosphate, pH 7.0
Sample:	2.5 mg/mL mAb in 50% A
Injection:	12, 20, 32, 40 µL

Figure 8. MAb Loading Test on *Proteomix*[®] HIC Butyl NP5 21.2 x 50 mm Size Column



Column:	<i>Proteomix</i> [®] HIC Butyl NP5, 5 µm, 21.2 x 50 mm (17.7 mL resin)
Flow Rate:	20.0 mL/min
Detector:	UV 280 nm
Temperature:	25 °C
Col. Pressure:	90 bar
Mobile Phase:	A: 2 M ammonium sulfate in 0.1 M sodium phosphate, pH 7.0 B: 0.1 M sodium phosphate, pH 7.0
Sample:	2.5 mg/mL mAb in 50% A
Injection:	200, 400 and 1000 µL

Applications

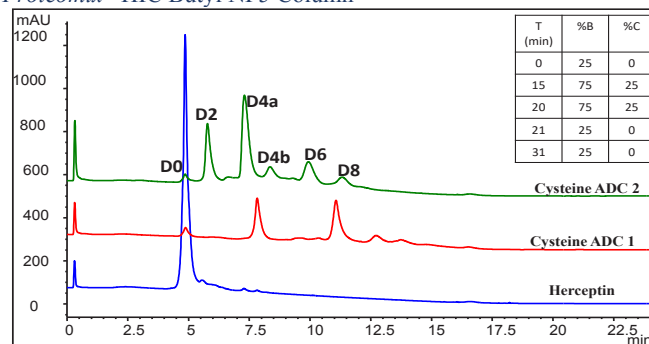
With its unique surface technology, the *Proteomix*[®] HIC column offers special selectivity and high-resolution separation of biomolecules such as mAb, bsmAb, ADC, proteins and related protein fragments, DNA, and oligonucleotides.

Separation of ADCs (Antibody Drug Conjugates)

The *Proteomix*[®] HIC Butyl columns provide effective and efficient separation of mAb and Antibody Drug Conjugates with different Drug-to-Antibody Ratio (DAR) species.

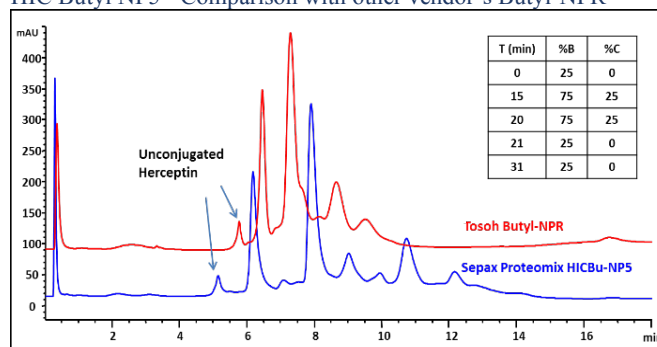
In the study, Intact Herceptin (Trastuzumab) and its two cysteine-based ADCs were analyzed on *Proteomix*[®] HIC Butyl NP5 column and another Butyl column from other vendors. *Proteomix*[®] HIC column has achieved better separation on both unconjugated mAb region as well as all the way to high DAR 8 region (Figures 9-11).

Figure 9. Herceptin and its Cysteine ADCs Separation on *Proteomix*[®] HIC Butyl NP5 Column



Column:	<i>Proteomix</i> [®] HIC Butyl NP5, 5 µm, 4.6 x 35 mm
Flow Rate:	0.8 mL/min
Detector:	UV 214 nm
Temperature:	25 °C
Mobile Phase:	A: 2 M ammonium sulfate in 0.025 M sodium phosphate, pH 7.0 B: 0.025 M sodium phosphate, pH 7.0 C: 100% IPA
Sample:	Herceptin/ADC1/ADC2, 1.0 mg/mL in 25 mM sodium phosphate
Injection:	10 µL

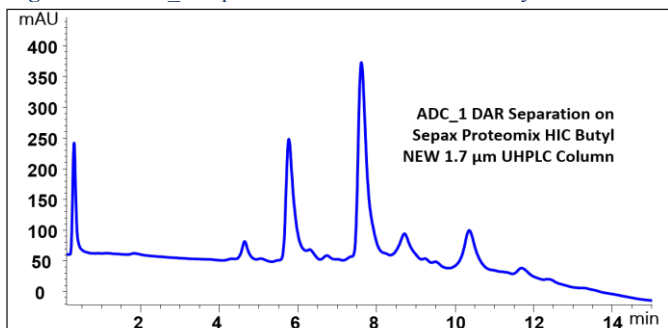
Figure 10. Herceptin-cysteine ADC Separation on *Proteomix*[®] HIC Butyl NP5 - Comparison with other vendor's Butyl-NPR



Column:	<i>Proteomix</i> [®] HIC Butyl NP5, 5 µm, 4.6 x 35 mm; Other vendor's Butyl-NPR, 2.5 µm, 4.6 x 35 mm
Flow Rate:	0.8 mL/min

Detector: UV 214 nm
 Temperature: 25 °C
 Mobile Phase: A: 2 M ammonium sulfate in 0.025 M sodium phosphate, pH 7.0
 B: 0.025 M sodium phosphate, pH 7.0
 C: 100% IPA
 Sample: ADC, 1.0 mg/mL in 1.0 M ammonium sulfate
 Injection: 10 µL

Figure 11. ADC_1 Separation - *Proteomix*[®] HIC Butyl NP1.7

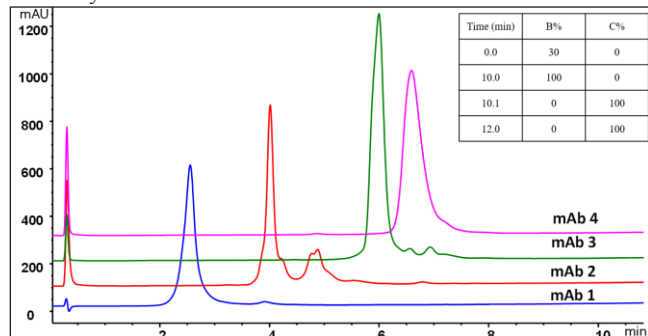


Column: *Proteomix*[®] HIC Butyl NP1.7, 1.7 µm, 4.6 x 35 mm
 Flow Rate: 0.8 mL/min
 Detector: UV 214 nm
 Temperature: 25 °C
 Mobile Phase: A: 2 M ammonium sulfate in 0.025 M sodium phosphate, pH 7.0
 B: 0.025 M sodium phosphate, pH 7.0
 C: 100% IPA
 Sample: ADC_1, 1.0 mg/mL in 1.0 M ammonium sulfate
 Injection: 20 µL

Analysis of Intact MABs (Monoclonal Antibodies)

The *Proteomix*[®] HIC Butyl columns provide high resolution and separation of intact mAbs under native conditions. It can be used for mAb characterization as well as the hydrophobicity screening for monoclonal antibody species with differing hydrophobicities.

Figure 12. Separation of Four Different mAbs on *Proteomix*[®] HIC Butyl NP5 Column

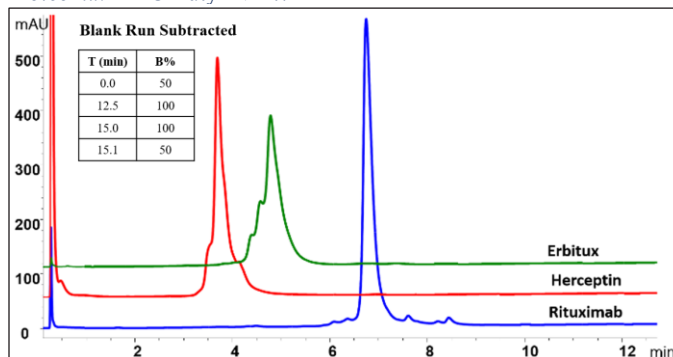


Column: *Proteomix*[®] HIC Butyl NP5, 5 µm, 4.6 x 35 mm
 Flow Rate: 1.0 mL/min
 Detector: UV 214 nm
 Temperature: 25 °C

Mobile Phase: A: 100 mM sodium phosphate buffer, 2 M ammonium sulfate, pH 7.0
 B: 100 mM sodium phosphate buffer, pH 7.0
 C: B + 1.0 M NaCl

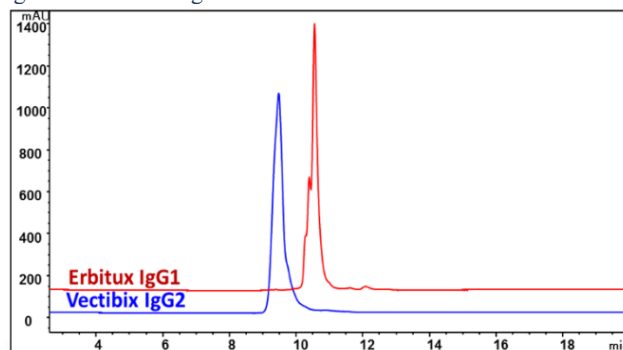
Injection: 15 µg

Figure 13. MAb (Erbix, Herceptin, and Rituximab) Analysis on *Proteomix*[®] HIC Butyl NP1.7



Column: *Proteomix*[®] HIC Butyl NP1.7, 1.7 µm, 4.6 x 35 mm
 Flow Rate: 0.8 mL/min
 Detector: UV 214 nm
 Temperature: 25 °C
 Mobile Phase: A: 100 mM sodium phosphate buffer, 2 M ammonium sulfate, pH 7.0
 B: 100 mM sodium phosphate buffer, pH 7.0
 Sample: 1 mg/mL Erbix, 0.5 mg/mL Herceptin in 1 M ammonium sulfate, 50 mM phosphate buffer, 2.5 mg/mL rituximab in 500 mM ammonium sulfate, 25 mM phosphate buffer
 Injection: 10 µg

Figure 14. Hydrophobic Interaction Chromatography - Erbix IgG1 vs. Vectibix IgG2

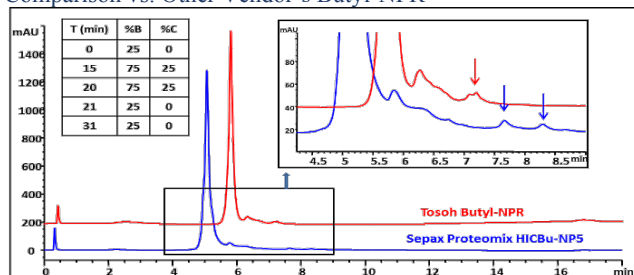


Column: *Proteomix*[®] HIC Butyl-NP5, 5 µm, 4.6 x 35 mm
 Flow Rate: 1.0 mL/min
 Detector: UV 214 nm
 Temperature: 25 °C
 Mobile Phase: A: 2.0 M ammonium sulfate in 100 mM sodium phosphate, pH 7.0
 B: 100 mM sodium phosphate pH 7.0
 Sample: Erbix IgG1 and Vectibix IgG2
 Injection: 10 µg

Analysis Comparison with Other Vendor's HIC Column

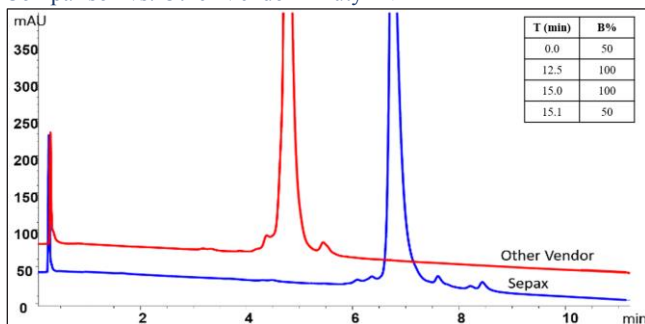
Comparison of Herceptin and Rituximab between *Proteomix*[®] HIC Butyl and another vendor's Butyl-NPR column demonstrates that higher resolution can be achieved on both *Proteomix*[®] HIC Butyl NP 5 and 1.7 μ m columns (Figures 15-16).

Figure 15. Herceptin Separation on *Proteomix*[®] HIC Butyl NP5 – Comparison vs. Other Vendor's Butyl-NPR



Column:	<i>Proteomix</i> [®] HIC Butyl NP5, 5 μ m, 4.6 x 35 mm; Vendor Butyl-NPR, 2.5 μ m, 4.6 x 35 mm
Flow Rate:	0.8 mL/min
Detector:	UV 214 nm
Temperature:	25 °C
Mobile Phase:	A: 2 M ammonium sulfate in 0.025 M sodium phosphate, pH 7.0 B: 0.025 M sodium phosphate, pH 7.0 C: 100% IPA
Sample:	Herceptin, 1.0 mg/mL in 1.0 M ammonium sulfate
Injection:	5 μ L

Figure 16. Rituximab Separation on *Proteomix*[®] HIC Butyl-NP1.7 Comparison vs. Other Vendor's Butyl-NPR

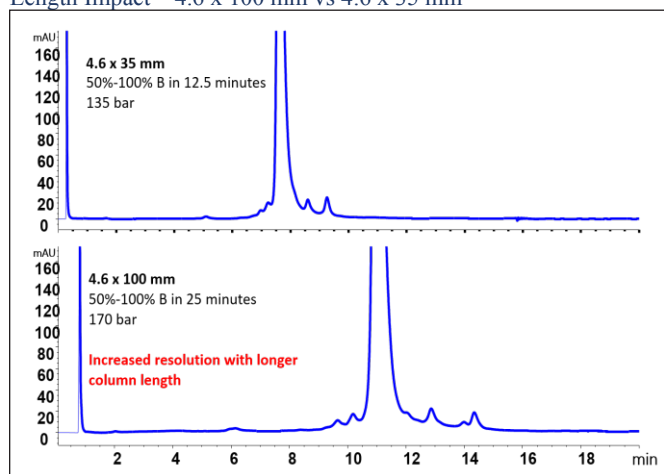


Column:	<i>Proteomix</i> [®] HIC Butyl NP1.7, 1.7 μ m, 4.6 x 35 mm; other vendor's Butyl NPR, 2.5 μ m, 4.6 x 35 mm
Flow Rate:	0.8 mL/min
Detector:	UV 214 nm
Temperature:	25 °C
Mobile Phase:	A: 100 mM sodium phosphate buffer, 2 M ammonium sulfate, pH 7.0 B: 100 mM sodium phosphate buffer, pH 7.0
Sample:	2.5 mg/mL rituximab in 500 mM ammonium sulfate, 25 mM phosphate buffer
Injection:	10 μ g

Impact of Column Length

For higher resolution and separation of difficult samples, longer columns are recommended. The higher aspect ratio can be achieved with our mechanically stable resin allowing for longer contact time and hydrophobic resolving power. A 100 mm length *Proteomix*[®] HIC Butyl-NP5 column increases the resolution in comparison to a 35 mm length column (Figure 17).

Figure 17. Rituximab - *Proteomix*[®] HIC Butyl-NP5 Column Length Impact – 4.6 x 100 mm vs 4.6 x 35 mm



Column:	<i>Proteomix</i> [®] HIC Butyl NP5, 5 μ m 4.6 x 35 mm; 5 μ m, 4.6 x 100 mm
Flow Rate:	0.8 mL/min
Detector:	UV 214 nm
System:	UHPLC
Temperature:	25 °C
Mobile Phase:	A: 100 mM sodium phosphate buffer, 2 M ammonium sulfate, pH 7.0 B: 100 mM sodium phosphate buffer, pH 7.0
Sample:	2.5 mg/mL rituximab in 500 mM ammonium sulfate, 25 mM phosphate buffer
Injection:	10 μ g mAb for 4603, 20 μ g for 4610

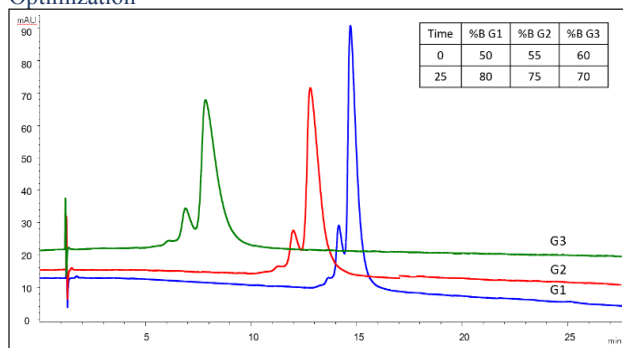
mAb Oxidation Variants Analysis

HIC can be used as an orthogonal chromatographic method to assess the populations of the biomolecules under native conditions.

Different forms of mAb oxidation can be monitored in a time course of mAb oxidation process by *Proteomix*[®] HIC Butyl columns, leading to a better understanding of the composition of species in the drug product. Partially oxidized mAbs can be separated into different peaks at several time points.

NIST MAb was analyzed by *Proteomix*[®] HIC Butyl columns in the below characterization study (Figure 18-19). Smaller variant peaks were observed eluting prior to the main peak. Possible causes could include oxidation of the antibody or structural changes by aspartic acid isomerization. Further investigation is needed.

Figure 18. NIST MAb on *Proteomix*[®] HIC Butyl-NP5 – Gradient Optimization



Column: *Proteomix*[®] HIC Butyl-NP5,
5 µm, 4.6 x 100 mm

Flow Rate: 0.5 mL/min

Detector: UV 280 nm

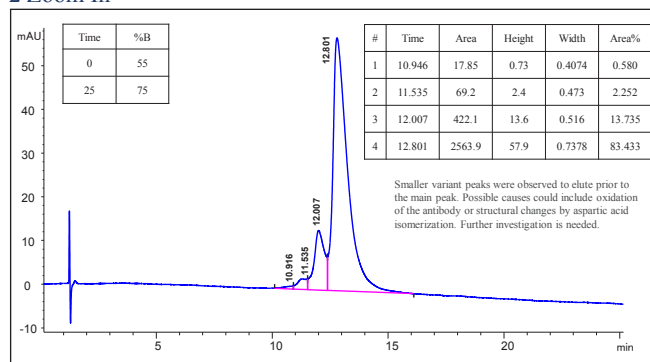
Temperature: 30 °C

Mobile Phase: A: 2M Ammonium Sulfate, in 100 mM Sodium Phosphate pH 7.0
B: 100 mM Sodium Phosphate pH 7.0

Sample: NIST MAb 10 mg/mL (pI 9.18, in 12.5 mM histidine, pH 6.0)

Injection: 2 µL

Figure 19. NIST MAb on *Proteomix*[®] HIC Butyl-NP5 – Gradient 2 Zoom In



Column: *Proteomix*[®] HIC Butyl-NP5,
5µm, 4.6 x 100 mm

Flow Rate: 0.5 mL/min

Detector: UV 280 nm

Temperature: 30 °C

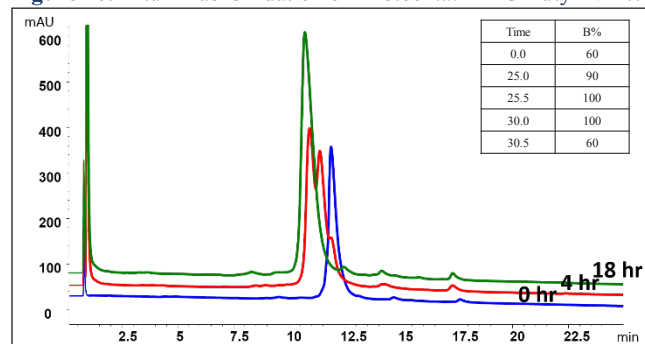
Mobile Phase: A: 2M Ammonium Sulfate, in 100 mM Sodium Phosphate pH 7.0
B: 100 mM Sodium Phosphate pH 7.0

Sample: NIST MAb 10 mg/mL (pI 9.18, in 12.5 mM histidine, pH 6.0)

Injection: 2 µL

An 18-hour reaction with t-BHP offers almost complete oxidation, which can be resolved from unoxidized mAb to a great degree. *Proteomix*[®] HIC Butyl-NP5 column was being used in this study to monitor and analyze the 18-hour mAb oxidation (Figures 20-21).

Figure 20. Rituximab Oxidation on *Proteomix*[®] HIC Butyl NP1.7



Column: *Proteomix*[®] HIC Butyl NP1.7,
1.7 µm, 4.6 x 100 mm

Flow Rate: 0.8 mL/min

Detector: UV 214 nm

Temperature: 25 °C

Pressure: 560 bar

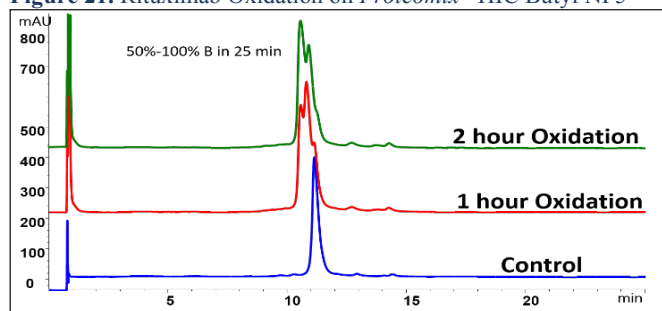
Mobile Phase: A: 100 mM sodium phosphate buffer, 2 M ammonium sulfate, pH 7.0
B: 100 mM sodium phosphate buffer, pH 7.0

MAb 10 mg/mL was diluted to 2.5 mg/mL with water and 70% t-BHP was added to a final 5% concentration, incubate in dark and take time point, dilute to 2.5 mg/mL in 500 mM ammonium sulfate, 25 mM phosphate buffer

Oxidation:

Injection: 12.5 µg mAb, 25 µg oxidized mAb

Figure 21. Rituximab Oxidation on *Proteomix*[®] HIC Butyl NP5



Column: *Proteomix*[®] HIC Butyl NP5,
5 µm, 4.6 x 100 mm

Flow Rate: 0.8 mL/min

Pressure: 170 bar

System: UHPLC

Detector: UV 214 nm

Temperature: 25 °C

Mobile Phase: A: 100 mM sodium phosphate buffer, 2 M ammonium sulfate, pH 7.0
B: 100 mM sodium phosphate buffer, pH 7.0

MAb 10 mg/mL was diluted to 5 mg/mL with water and 70% t-BHP was added to a final 5% concentration, incubate in dark and take time point, dilute to 2.5 mg/mL in 500 mM ammonium sulfate, 25 mM phosphate buffer

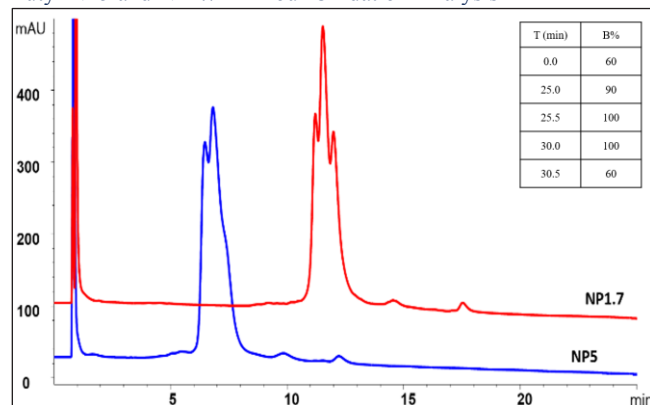
Oxidation:

Injection: 10 µg mAb, 20 µg oxidized mAb

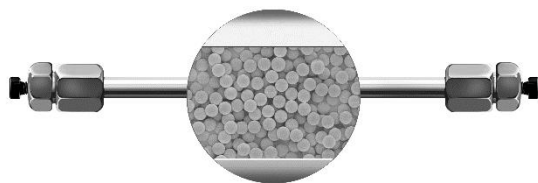
Impact of Particle Size

The smaller particle size of *Proteomix*[®] HIC Butyl NP1.7 makes it more sensitive to capture small changes of biomolecule variants, which provides superior ability to achieve a higher resolution separation of a wide range of protein variants and impurities than the NP 5um column. *Proteomix*[®] HIC Butyl NP1.7 is an excellent choice for higher resolution separations of mAb oxidation and other protein variants analysis.

Figure 22. Rituximab Oxidation- *Proteomix*[®] HIC Butyl NP5 and NP1.7 – 2-hour Oxidation Analysis



Column:	<i>Proteomix</i> [®] HIC Butyl NP1.7, 1.7 μ m, 4.6 x 100 mm <i>Proteomix</i> [®] HIC Butyl NP5, 5 μ m, 4.6 x 100 mm
Flow Rate:	0.8 mL/min
Detector:	UV 214 nm
Temperature:	25 $^{\circ}$ C
Pressure:	560 bar
Mobile Phase:	A: 100 mM sodium phosphate buffer, 2 M ammonium sulfate, pH 7.0 B: 100 mM sodium phosphate buffer, pH 7.0
mAb	10 mg/mL was diluted to 2.5 mg/mL with water and 70% t-BHP was added to a final 5% concentration, incubate in dark and take time point, dilute to 2.5 mg/mL in 500 mM ammonium sulfate, 25 mM phosphate buffer.
Oxidation:	
Injection:	25 μ g mAb 2-hour oxidation sample

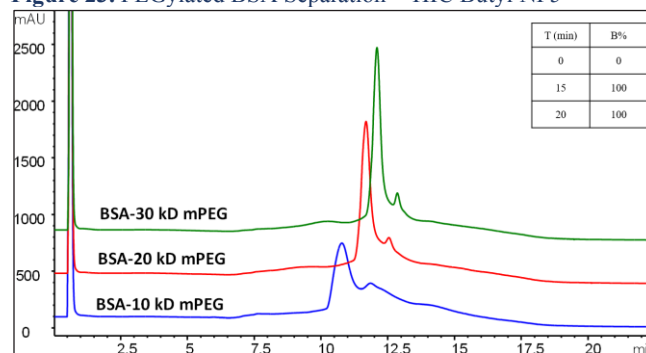


Proteomix[®] HIC Column

High Resolution Hydrophobic Interaction Separation for Biomolecules

Separations of PEGylated Proteins

Figure 23. PEGylated BSA Separation - HIC Butyl NP5



Column:	<i>Proteomix</i> [®] HIC Butyl NP5, 5 μ m, 4.6 x 35 mm
Flow Rate:	0.4 mL/min
Detector:	UV 214 nm
Temperature:	25 $^{\circ}$ C
Mobile Phase:	A: 2 M ammonium sulfate in 0.025 M sodium phosphate, pH 7.0 B: 0.1 M sodium phosphate, pH 7.0
Sample:	10 kD, 20 kD and 30 kD PEGylated BSA diluted with mobile phase A
Injection:	20 μ L

Accessories

<p>Precolumn Filter for Analytical Columns For Analytical Columns with Particle Size of 5 μm Part Number: 102000-P355 PEEK Precolumn Filter & Frits (2 μm) Part Number: 102001-P355 PEEK Refill Frits (2 μm), 5 units/pk Part Number: 102000-S355 SS Precolumn Filter & Frits (2 μm) Part Number: 102001-S355 SS Refill Frits (2 μm), 5 units/pk</p> <p>For Analytical Columns with Particle Size of 1.7 μm Part Number: 102000-P356 PEEK Precolumn Filter & Frits (0.5 μm) Part Number: 102001-P356 PEEK Refill Frits (0.5 μm), 5 units/pk Part Number: 102000-P346 PEEK Precolumn Filter with SS Frits (0.5 μm) Part Number: 102001-P346 SS Refill Frits (0.5 μm), 5 units/pk</p>	
<p>Precolumn Filter for Preparative Column IDs \geq 21.2 mm Part Number: 102020-21200 SS Precolumn Filter & Frits (2 μm) Part Number: 102020-00001 SS Refill Frits (2 μm), 5 units/pk</p>	
<p>Cartridge & Holder Packed with Resin. Part Number is dependent to phase. Replacement Cartridge Holder Part Number: 102000-2001, Holder for 2.1mm ID column Part Number: 102000-4001, Holder for 4.6 mm ID column</p>	
<p>PEEK Column Coupler Part Number: 102002-COUPLER</p>	
<p>PEEK/SS coupler (for Columns ID > 7.8 mm) Part Number: 102003-COUPLER</p>	
<p>PEEK Coupler with Flexible Tubing (10cm length, 10-32 fitting with 1/16 OD) Part Number: 102006-COUPLER</p>	

Ordering Information

Proteomix® HIC Butyl

P/N	Particle Size	Column Size (mm)
431NP2-4603	1.7 µm	4.6 x 35
431NP2-4605	1.7 µm	4.6 x 50
431NP2-4610	1.7 µm	4.6 x 100
431NP2-4001C	1.7 µm	4.0 x 10 (Guard)
431NP5-4603	5 µm	4.6 x 35
431NP5-4605	5 µm	4.6 x 50
431NP5-4610	5 µm	4.6 x 100
431NP5-4615	5 µm	4.6 x 150
431NP5-4001C	5 µm	4.0 x 10 (Guard)
431NP5-7805	5 µm	7.8 x 50
431NP5-7810	5 µm	7.8 x 100
431NP5-7815	5 µm	7.8 x 150
431NP5-10005	5 µm	10.0 x 50
431NP5-10010	5 µm	10.0 x 100
431NP5-10015	5 µm	10.0 x 150
431NP5-21205	5 µm	21.2 x 50
431NP5-21210	5 µm	21.2 x 100
431NP5-21215	5 µm	21.2 x 150
431NP5-30005	5 µm	30.0 x 50
431NP5-30010	5 µm	30.0 x 100
431NP5-30015	5 µm	30.0 x 150

Proteomix® HIC Ethyl

P/N	Particle Size	Column Size (mm)
432NP2-4603	1.7 µm	4.6 x 35
432NP2-4605	1.7 µm	4.6 x 50
432NP2-4610	1.7 µm	4.6 x 100
432NP2-4001C	1.7 µm	4.0 x 10 (Guard)
432NP5-4603	5 µm	4.6 x 35
432NP5-4605	5 µm	4.6 x 50
432NP5-4610	5 µm	4.6 x 100
432NP5-4615	5 µm	4.6 x 150
432NP5-4001C	5 µm	4.0 x 10 (Guard)
432NP5-7805	5 µm	7.8 x 50
432NP5-7810	5 µm	7.8 x 100
432NP5-7815	5 µm	7.8 x 150
432NP5-10005	5 µm	10.0 x 50
432NP5-10010	5 µm	10.0 x 100
432NP5-10015	5 µm	10.0 x 150
432NP5-21205	5 µm	21.2 x 50
432NP5-21210	5 µm	21.2 x 100
432NP5-21215	5 µm	21.2 x 150
432NP5-30005	5 µm	30.0 x 50
432NP5-30010	5 µm	30.0 x 100
432NP5-30015	5 µm	30.0 x 150

Proteomix® HIC Phenyl

P/N	Particle Size	Column Size (mm)
433NP2-4603	1.7 µm	4.6 x 35
433NP2-4605	1.7 µm	4.6 x 50
433NP2-4610	1.7 µm	4.6 x 100
433NP2-4001C	1.7 µm	4.0 x 10 (Guard)
433NP5-4603	5 µm	4.6 x 35
433NP5-4605	5 µm	4.6 x 50
433NP5-4610	5 µm	4.6 x 100
433NP5-4615	5 µm	4.6 x 150
433NP5-4001C	5 µm	4.0 x 10 (Guard)
433NP5-7805	5 µm	7.8 x 50
433NP5-7810	5 µm	7.8 x 100
433NP5-7815	5 µm	7.8 x 150
433NP5-10005	5 µm	10.0 x 50
433NP5-10010	5 µm	10.0 x 100
433NP5-10015	5 µm	10.0 x 150
433NP5-21205	5 µm	21.2 x 50
433NP5-21210	5 µm	21.2 x 100
433NP5-21215	5 µm	21.2 x 150
433NP5-30005	5 µm	30.0 x 50
433NP5-30010	5 µm	30.0 x 100
433NP5-30015	5 µm	30.0 x 150

Proteomix® HIC Propyl

P/N	Particle Size	Column Size (mm)
434NP2-4603	1.7 µm	4.6 x 35
434NP2-4605	1.7 µm	4.6 x 50
434NP2-4610	1.7 µm	4.6 x 100
434NP2-4001C	1.7 µm	4.0 x 10 (Guard)
434NP5-4603	5 µm	4.6 x 35
434NP5-4605	5 µm	4.6 x 50
434NP5-4610	5 µm	4.6 x 100
434NP5-4615	5 µm	4.6 x 150
434NP5-4001C	5 µm	4.0 x 10 (Guard)
434NP5-7805	5 µm	7.8 x 50
434NP5-7810	5 µm	7.8 x 100
434NP5-7815	5 µm	7.8 x 150
434NP5-10005	5 µm	10.0 x 50
434NP5-10010	5 µm	10.0 x 100
434NP5-10015	5 µm	10.0 x 150
434NP5-21205	5 µm	21.2 x 50
434NP5-21210	5 µm	21.2 x 100
434NP5-21215	5 µm	21.2 x 150
434NP5-30005	5 µm	30.0 x 50
434NP5-30010	5 µm	30.0 x 100
434NP5-30015	5 µm	30.0 x 150

Proteomix® HIC Phase Screening Kit

(Ethyl, Propyl, Butyl, Phenyl)

P/N	Particle Size	Column Size (mm)
HICKIT-4603	5 µm	4.6 x 35

How to Order

Please contact Sepax Sales Department:

Phone: 302-366-1101 or 1-877-SEPAX-US

Fax: 302-366-1151

Email: sales@sepax-tech.com

Address: 5 Innovation Way
Newark, Delaware 19711, USA

Discounts

Sepax Technologies offers the best discounts determined by the volume of the purchase. Please contact the Sepax Sales Department for your maximum discount.

Opening a Sepax Account

Call the Sepax Sales Department and supply your business information, and billing and shipping address to set up a Sepax account. Open account terms are subject to credit approval.

Payment Term

Terms of payment are net 30 days. Mastercard®, Visa®, and American Express® are accepted. There is no minimum order.

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- Sepax accepts eligible returns within 15 days of customer receiving order.
- Non-eligible returns include products contaminated, treated, or tested, with isotope, radioactive chemical, or any other types of hazardous material, semi-prep and prep columns, custom products, bulk resins/materials, and demo purchase.
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- Return and refund to be made with same method of purchase, i.e. through distributor if purchased through distributor.

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