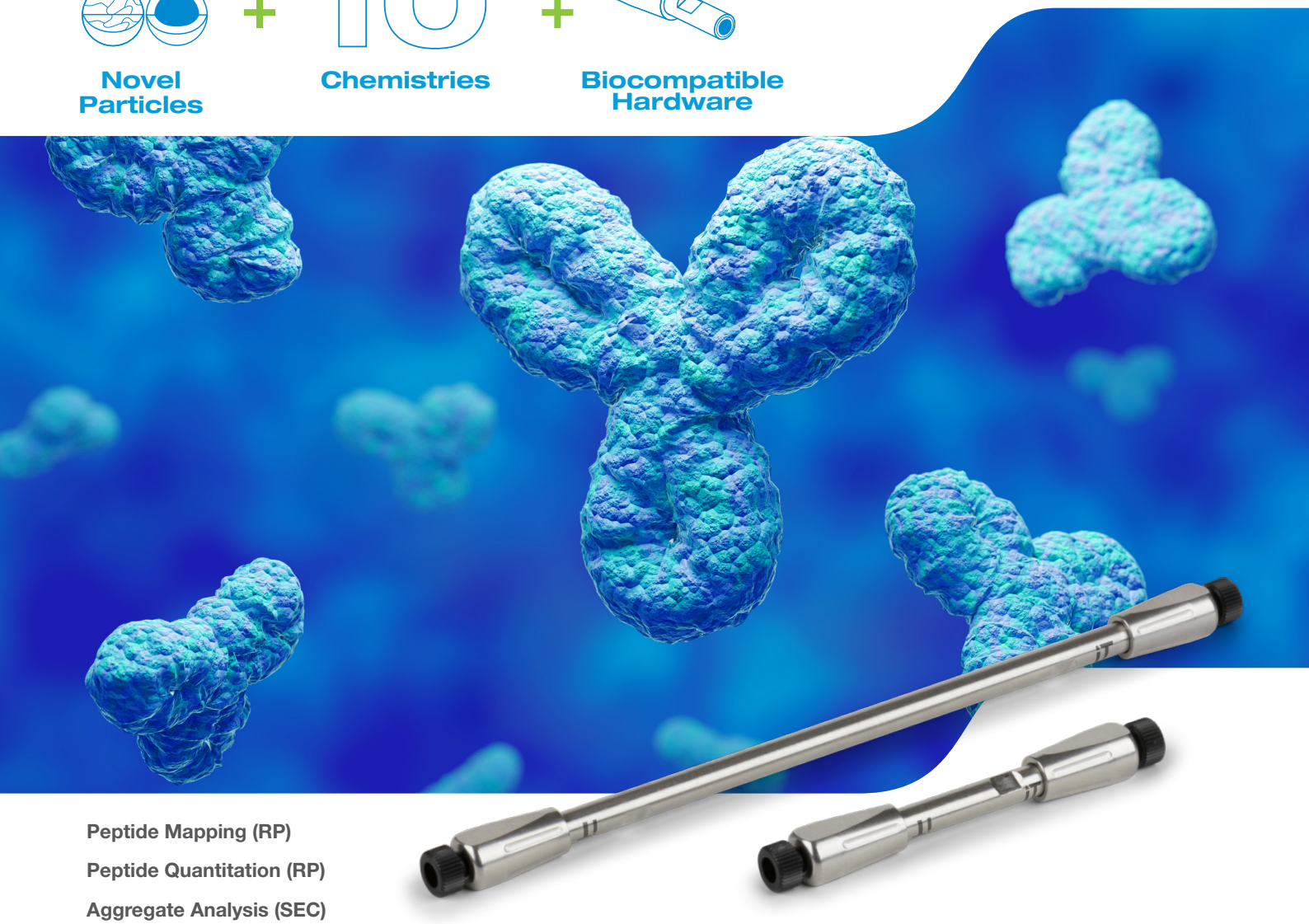
Biozen™
by Phenomenex

Biopharmaceutical Chromatography Solutions

Novel Particles + 10 Chemistries + Biocompatible Hardware



- Peptide Mapping (RP)
- Peptide Quantitation (RP)
- Aggregate Analysis (SEC)
- Charge Variant Analysis (IEX)
- Glycan Analysis (HILIC)
- Intact and Fragment Analysis (RP)
- Intact Mass (RP)
- Drug Antibody Ratio (RP)
- Oligonucleotide Analysis (RP)

www.phenomenex.com/Biozen

phenomenex™

We've been busy.

Biozen™ by Phenomenex

From the minds of protein chemists, chromatographers, and mass spec gurus, we've forged something new.

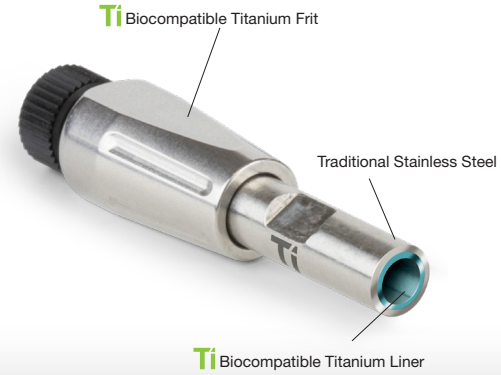
- A promise to drive successful bioseparations and fulfill the needs of our customers worldwide?
- A comprehensive blend of innovative and acclaimed separation materials?
- A new titanium hardware to minimize priming and non-specific interactions?
- A product QC testing program to reflect customer applications?
- A team of savvy biopharma separation scientists to back your endeavors?

YES

Table of Contents

Biocompatible Column Hardware

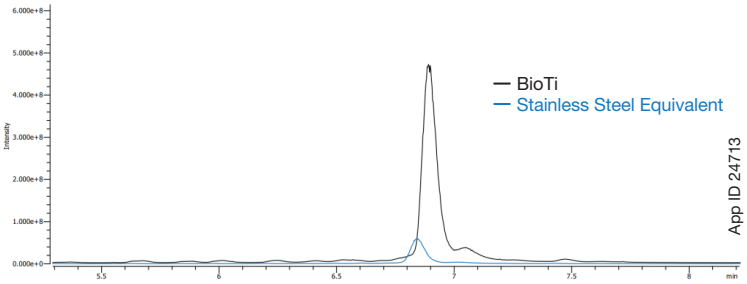
Utilizing titanium infused bioinert BioTi™ column hardware and frit, you can rest assured knowing both the need for column priming as well chromatographic non-specific interactions are minimized. Whether it be oligos, proteins or peptides, maximal analyte recovery and reproducibility are assured.



Extend Column Lifetime with Biocompatible Guard Cartridges

Biocompatible SecurityGuard™ Standard and ULTRA guard cartridges remove unwanted contaminants before they clog your column or system. Each Biozen column has a matching guard to ensure workflow applicability.

Nusinersen on Biozen 2.6 µm Oligo Column Compared to stainless steel equivalent



Column: Biozen 2.6 µm Oligo (BioTi)
Clarity 2.6 µm Oligo-XT (stainless steel)
Dimension: 100 x 2.1 mm
Part No.: 00D-4790-AN (Biozen)
Mobile Phase: A: 10 mM Hexylamine in Water + 12.5 mM Hexafluoro-2-propanol
B: 10 mM Hexylamine in Methanol + 12.5 mM Hexafluoro-2-propanol

Gradient:

Time (min)	% B
0	25
2	25
16	75
16.1	95
20	95
20.1	25

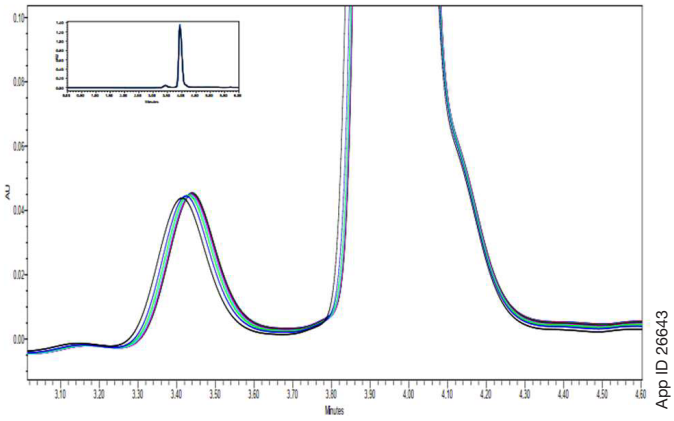
Flow Rate: 0.3 mL/min
Injection Volume: 2 µL (12.5 ng)
Temperature: 55 °C
Instrument: Shimadzu® LC-20A Prominence
Detection: TOF-MS
Detector: SCIEX® TripleTOF6600

Overlaid Successive Injections – Protein Priming

Retention Times for Protein Standards

Injection	Peak Area, Monomer	Peak Area, Dimer
1	10757707	462531
2	10774224	474567
3	10780383	475693
4	10775497	478940
5	10773430	480767
6	10779073	480131
7	10785349	481109
8	10785780	480578
9	10782926	481759
10	10771993	482644
Average	10776636.2	477871.9
%CV	0.1%	1.3%

Chromatographic Overlays for BSA



LC Conditions:

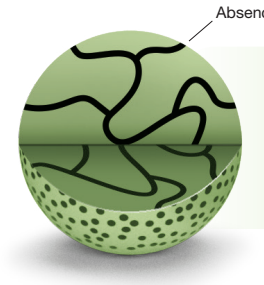
Column: Biozen™ 1.8 µm dSEC-2, 200 Å
Part No.: 00F-4787-E0
Dimension: 150 x 4.6 mm
Mobile Phase: 200 mM Potassium Phosphate + 250 mM KCl, pH 6.2

Flow Rate: 0.35 mL/min
Injection Volume: 10 µL
Temperature: 25 °C
Detection: UV @ 280 nm
Sample: Bovine serum albumin (10 mg/mL)

Advanced Particle Platforms

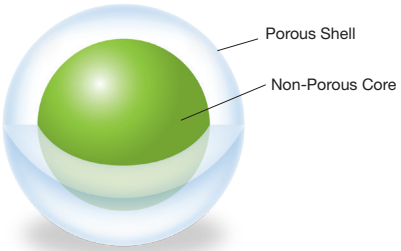
All Biozen particle platforms were individually designed and manufactured by Phenomenex to provide fit-for-purpose performance, ruggedness, and reproducibility across each of its supported applications. Each platform differs in the proprietary processing techniques used to control particle size, morphology and selectivity required to flexibly accommodate the unique properties and testing requirements of new emerging modalities.

Thermally Modified Fully Porous

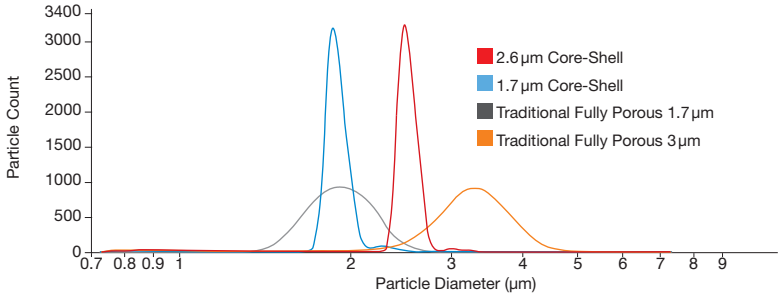


Through a series of proprietary thermal processing steps, we eliminate micropores and improve consistency leading to **high column efficiency and inertness**.

Core-Shell Technology

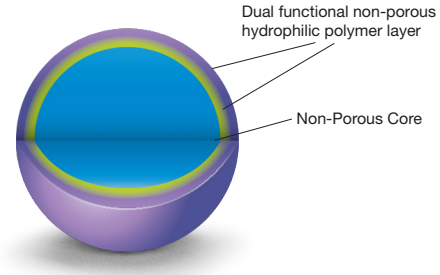


Uniform Particle Size Distribution

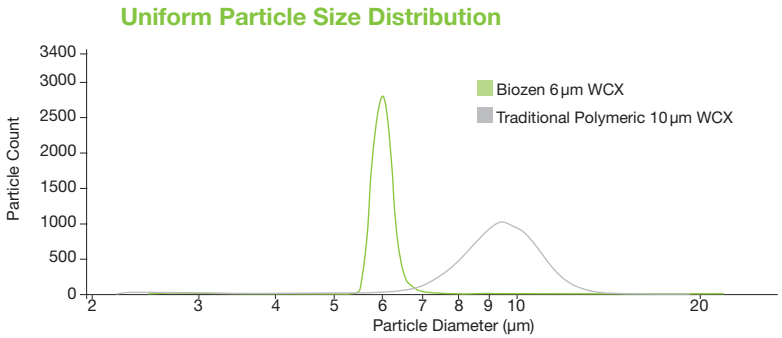


Using sol-gel processing techniques that incorporate nano structuring technology, a durable, homogeneous porous shell is grown on a solid silica core. This optimized process combined with industry leading column packing technology produces **highly reproducible columns that generate extremely high efficiencies and sensitivity.**

Monosized Polymeric Non-Porous

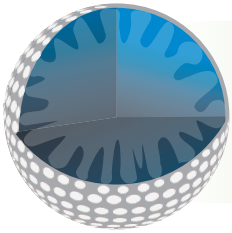


Uniform Particle Size Distribution



Meticulously controlled monosized particle technology **enhances particle consistency to improve chromatographic efficiency and reproducibility.** This innovative non-porous particle serves as the perfect backbone for complex ion-exchange chemistries.

Pore Controlled Technology

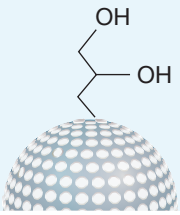


dSEC columns are packed with low pore volume silica coupled with a proprietary hydrophilic diol-type bonded surface chemistry that **prevents secondary interactions** between the analyte silica surface and **enhances column lifetime, stability, and analyte recovery.**

10 Particle Chemistries

Biozen™ by Phenomenex

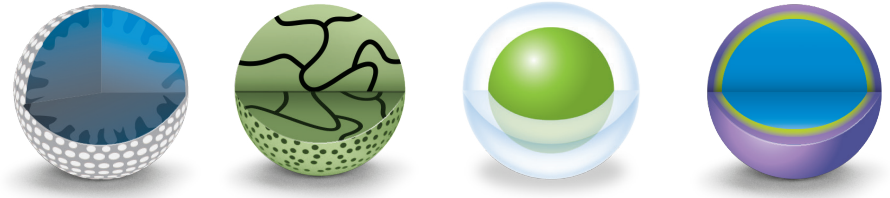
NEW dSEC-7



Biozen dSEC-7 3 µm

Inert, 700 Å large pore particle for the separation and quantitation of AAVs, IgMs and other large biotherapeutics aggregate and fragment analysis.

4 Particle Platforms



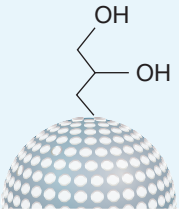
Pore Controlled Technology

Thermally Modified Fully Porous

Core-Shell Technology

Monosized Polymeric Non-Porous

SEC



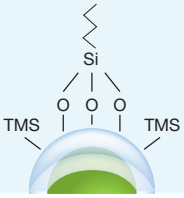
Biozen dSEC-2 1.8 µm and 3 µm

Inert, high-strength porous particle for the separation and quantitation of monoclonal antibody aggregate and fragments.

Biozen SEC-3 1.8 µm

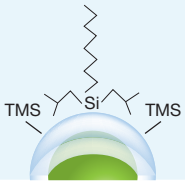
Extremely inert, high density fully porous particle with high efficiency and high molecular weight (HMW) separation range of 10 k–700 kDa.

Intact



Biozen WidePore C4 2.6 µm

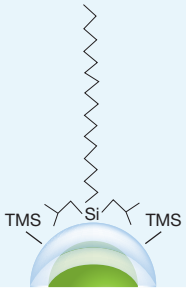
Core-shell particle with butyl stationary phase and optimal wide pore size distribution for better resolution of large biologics, including monoclonal antibodies and subunit analysis.



Biozen Intact XB-C8 3.6 µm

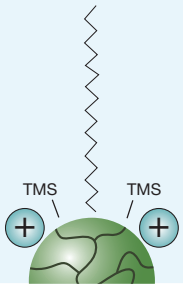
Large pore core-shell particle for fast intact and subunit biologic entry. C8 provides highly useful moderate hydrophobic selectivity.

Peptide



Biozen Peptide XB-C18 1.7 µm and 2.6 µm

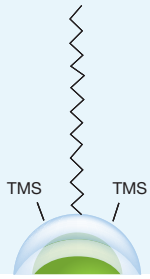
Overall retention of both acidic and basic peptides through C18 stationary phase with di-isobutyl side chains.



Biozen Peptide PS-C18 1.6 µm and 3 µm

Excellent retention by combined positively charged surface ligand and C18 ligand.

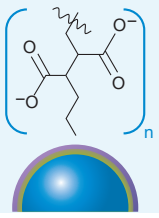
Oligonucleotides



Biozen Oligo 1.7 µm and 2.6 µm

Organo-silica core-shell particle bonded with a C18 stationary phase offers high selectivity for even minute oligo differences alongside high and low pH robustness.

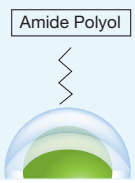
Ion-Exchange



Biozen WCX 6 µm

Monosized particles grafted with linear polycarboxylate chains to envelop and separate proteins from acidic/basic variants.

Glycan



Biozen Glycan 2.6 µm

Provides optimal combination of high efficiency and selectivity for released glycans.

All Biozen chemistries are available in analytical columns and select chemistries are available for nano LC use.

Chat to learn more
www.phenomenex.com/chat

Peptide Mapping

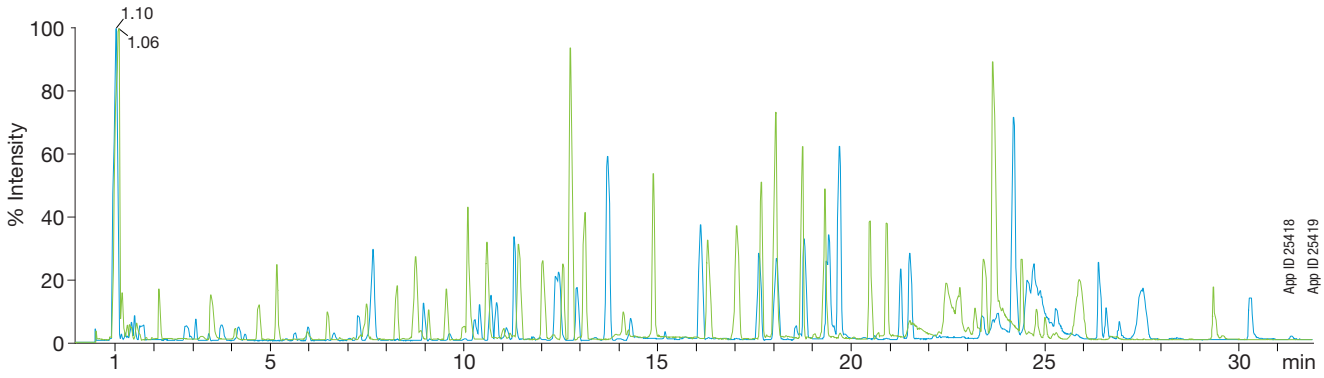
Digesting proteins into their peptide components is crucial to understanding post translation modifications. We have designed two Biozen Peptide columns offering unique orthogonal selectivities to achieve full sequence coverage. Achieve full sequence coverage through higher peak capacities, improved peak shapes and higher sensitivity.

Infliximab Comparison, XB-C18 vs PS-C18

Biozen 2.6 µm XB-C18, 100 % Sequence Coverage
Biozen 1.6 µm PS-C18, 100 % Sequence Coverage

More retentive for early eluting peptides

Excellent separation/ peak shape for later eluting peptides



Method Conditions:

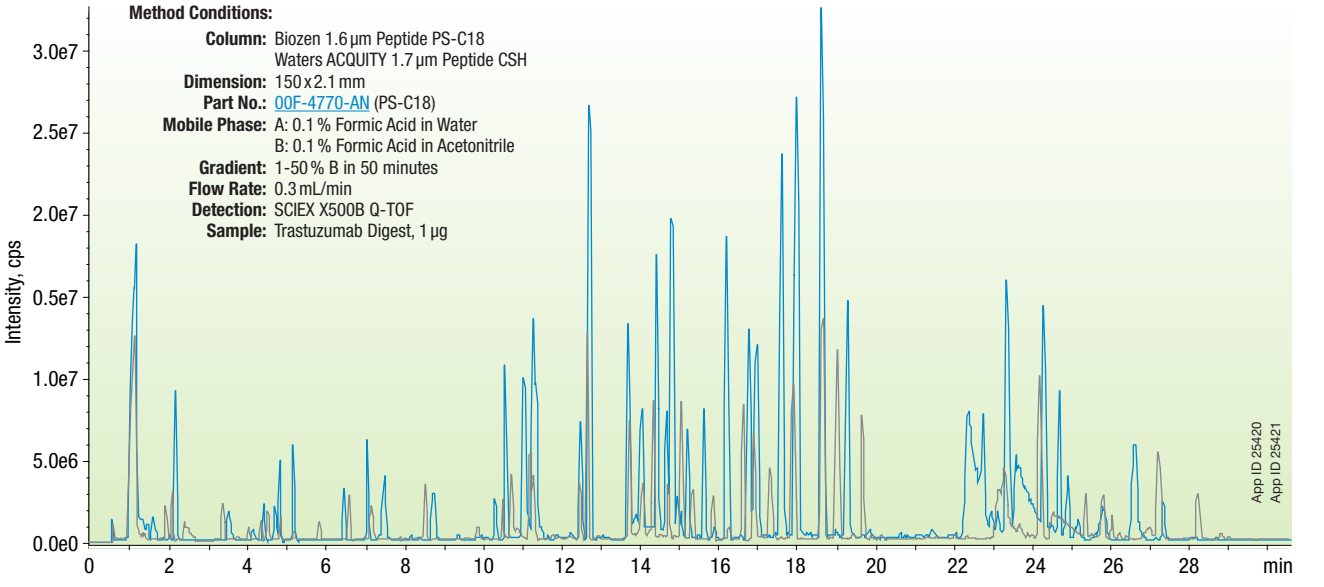
Column 1:	Biozen 2.6 µm Peptide XB-C18
Part No.:	00F-4768-AN (XB-C18)
Column 2:	Biozen 1.6 µm Peptide PS-C18
Part No.:	00F-4770-AN (PS-C18)
Mobile Phase:	A. 0.1 % Formic Acid in Water B. 0.1 % Formic Acid in Acetonitrile
Gradient:	1-50 % B in 50 minutes
Flow-rate:	0.3 mL/min
Detection:	SCIEX® X500B Q-TOF
Sample:	Infliximab

Utilize complementary Biozen selectivites for easier characterization of PTMs

Trastuzumab Comparison, PS-C18 vs Peptide CSH

Biozen 1.6 µm Peptide PS-C18, 137 Unique Peptides
Waters® ACQUITY® 1.7 µm Peptide CSH, 103 Unique Peptides

Improved sequence coverage and sensitivity compared to equivalent alternatives



Comparative separations may not be representative of all applications.

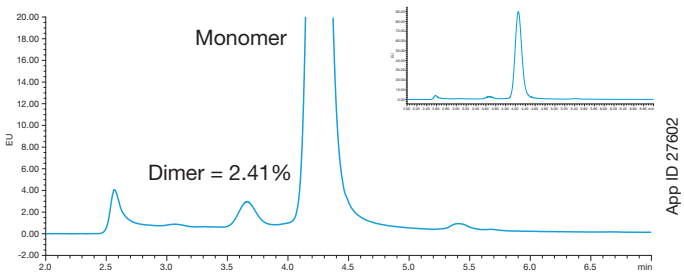
Aggregate Analysis

Robust & Reliable Aggregate Analysis for AAV & Large Biomolecules

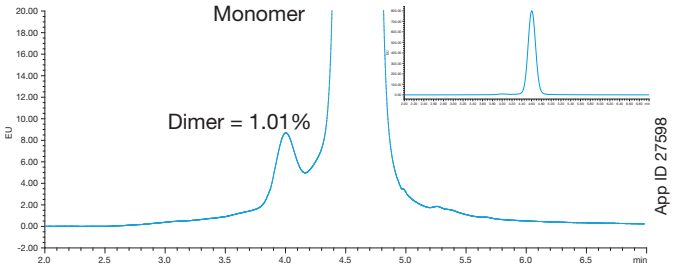
Biozen dSEC-7 was designed with a 700 Å pore size optimized for AAVs and other large biomolecules. Utilizing a hydrophilic diol-type surface chemistry packed in optimized column dimensions, unwanted surface interactions are mitigated while conserving sample consumption by up to 90% compared to traditional SEC columns.

Biozen dSEC-7 Hydrophilic Surface Chemistry Improves Resolution of Monomer and Aggregate Peaks

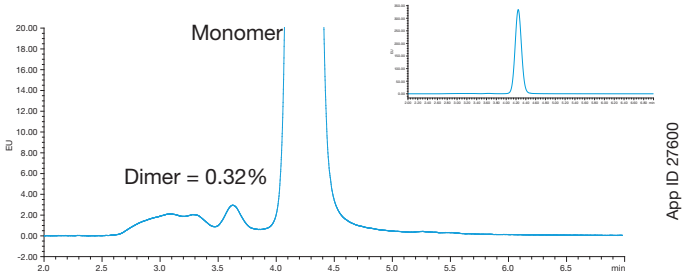
AAV2



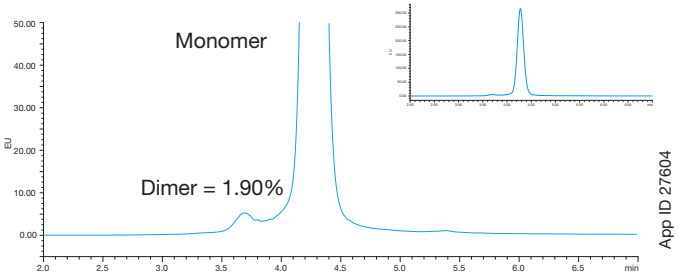
AAV5



AAV8



AAV9



Serotype	Peak	Retention Time (min)	%Area	Resolution
AAV2	Monomer	4.26	94.05	2.20
	Dimer	3.68	2.57	
AAV5	Monomer	4.60	99.05	1.60
	Dimer	4.00	0.95	
AAV8	Monomer	4.25	98.39	2.20
	Dimer	3.64	0.50	
AAV9	Monomer	4.28	98.51	2.00
	Dimer	3.67	1.59	

LC Conditions

Column: Biozen 3 µm dSEC-7
Dimension: 150 x 4.6 mm
Part No.: 00F-4789-E0
Mobile Phase: 20 mM Sodium Phosphate, pH 6.6 + 350 mM Potassium Chloride
Flow Rate: 350 µL/min (Isocratic)
Temperature: 25 °C
Injection: 2 µL
Instrument Waters® ACQUITY® H-Class
Detection: FLR - Ex 280 nm, Em 350 nm Sampling Rate: 40 Hz
Sample: 1. AAV2-CAG-GFP, 2E13 vg/mL (AAV2)
2. AAV5-CMV-GFP, 2E13 vg/mL (AAV5)
3. AAV8-CMV-GFP, 2E13 vg/mL (AAV8)
4. AAV9-CMV-GFP, 2E13 vg/mL (AAV9)

Find more size exclusion applications such as improving lifetime and the ability to use organic solvents without compromising results see:
www.phenomenex.com/dSEC

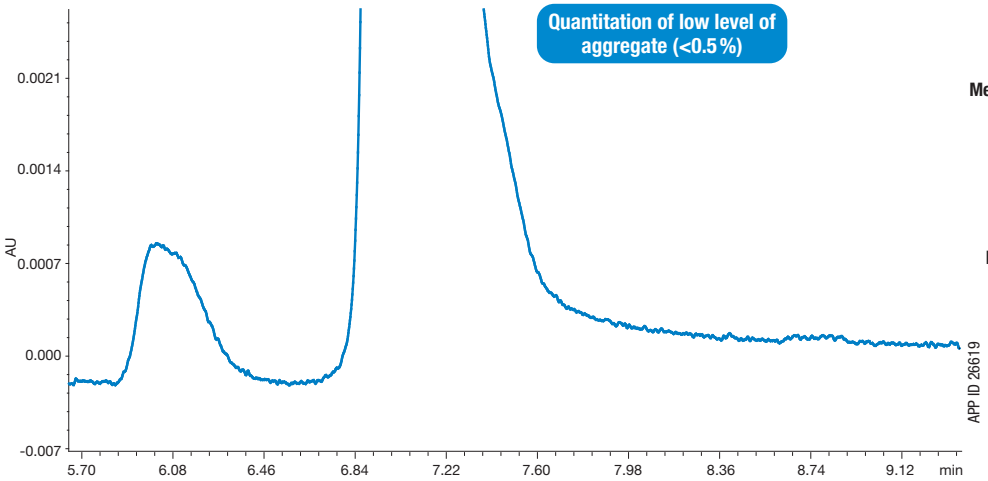
Aggregate Analysis

With the expectation of low level protein aggregation (<0.1% peak area compared to monomer), robust aggregate analysis is critically sought after. Biozen SEC columns are designed to address deficiencies in traditional SEC columns through low pore volume silica packed into BioTi™ hardware. Rest assured your resolution, peak shape, and %recovery demands even at low concentrations, will be achieved.

New Standard for Platform SEC Methods

Whether IgG2 or IgG4 isotypes, bispecifics, or Fc-Fusions, dSEC-2 provides excellent separation and sample recovery for many different classes of antibodies and related recombinant proteins.

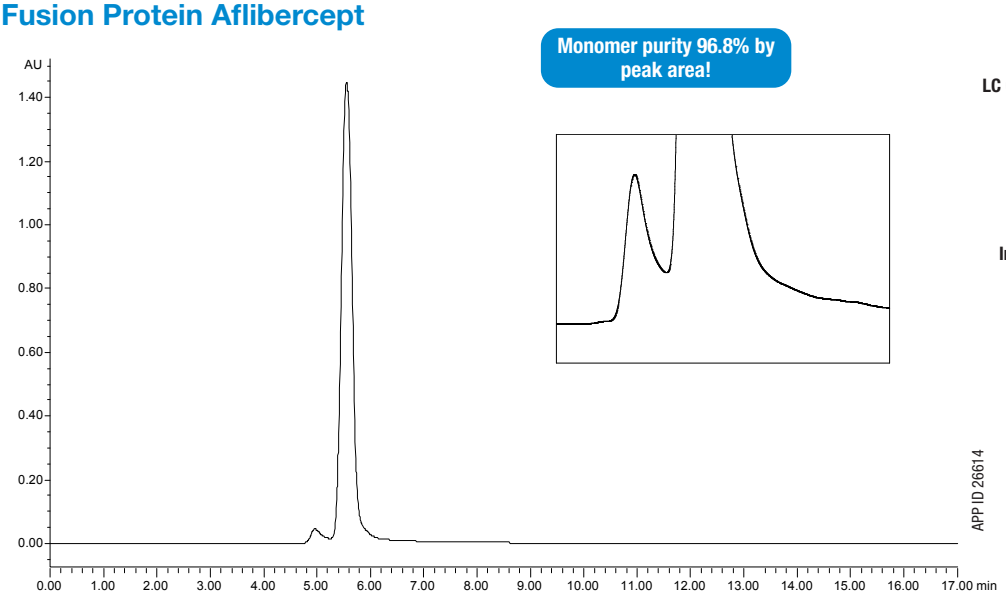
Bispecific Emicizumab



Method Conditions:

Column:	Biozen 1.8 µm dSEC-2, 200 Å
Dimension:	300 x 4.6 mm
Part No.:	00H-4787-E0
Mobile Phase:	200 Potassium Phosphate + 250 mM KCl, pH 6.2
Flow Rate:	0.35 mL/min
Injection Volume:	10 µL
Detector:	UV @ 280 nm
Temperature:	25 ˚C
Sample:	Emicizumab, 10 mg/mL

Fusion Protein Aflibercept



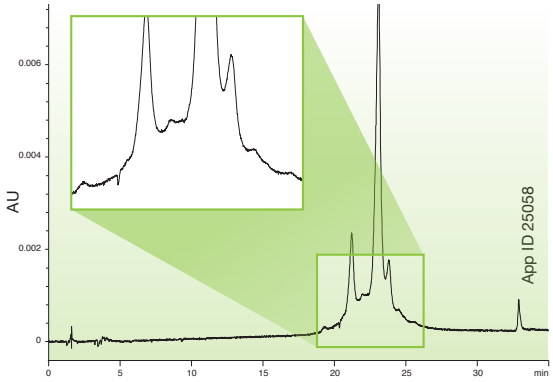
LC Conditions:

Column:	Biozen 3 µm dSEC-2, 200 Å
Dimension:	300 x 7.8 mm
Part No.:	00H-4788-K0
Mobile Phase:	50 mM Sodium Phosphate + 300 mM NaCl, pH 6.8
Flow Rate:	1.15 mL/min
Injection Volume:	10 µL
Detector:	UV @ 280 nm
Temperature:	30 ˚C
Sample:	Aflibercept, 25 mg/mL

Charge Variant Analysis

Biozen WCX was crafted to consistently differentiate between native protein charge variants that arise from PTMs within biotherapeutics. The linear polycarboxylate chains grafted to monosized non-porous polymeric particles envelop and separate proteins from acidic and basic variants in both ionic strength and pH-based method extremes. Biozen WCX media enables scientists to reproducibly characterize charge heterogeneity while ensuring excellent recovery through both particle inertness and bioinert titanium BioTi™ column hardware.

Trastuzumab (MES Salt Gradient)

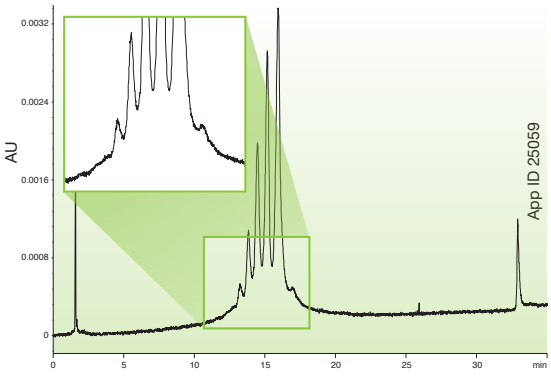


Column: Biozen 6 µm WCX
Dimension: 250 x 4.6 mm
Part No.: 00G-4777-E0
Mobile Phase: A: 20 mM MES (pH 5.6)
B: 20 mM MES + 300 mM NaCl (pH 5.6)

Gradient: Time (min)	% B
0	15
1	15
31	45
31.1	100
34	100
35	15

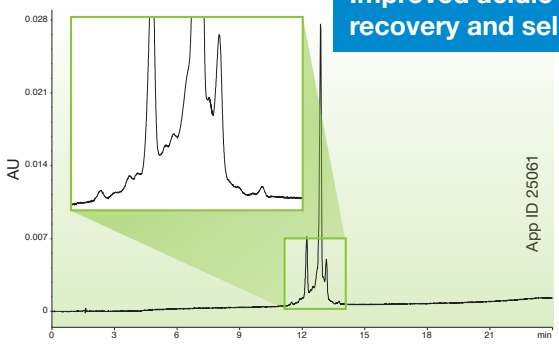
Flow Rate: 1 mL/min
Temperature: 30 °C
Detection: UV @ 280 nm
Sample: Trastuzumab

Cetuximab (MES Salt Gradient)



Trastuzumab (pH Gradient Buffer)

Improved acidic variant recovery and selectivity!

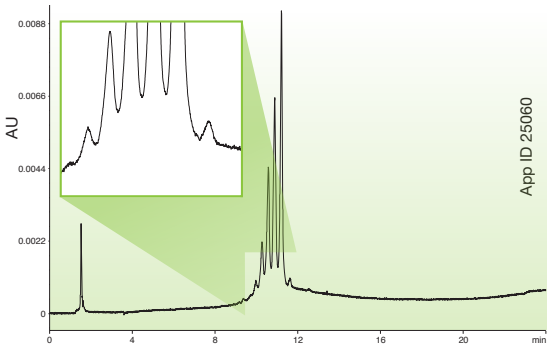


Column: Biozen 6 µm WCX
Dimension: 250 x 4.6 mm
Part No.: 00G-4777-E0
Mobile Phase: A: CX -1 (pH 5.6) Gradient Buffer*
B: CX -1 (pH 10.2) Gradient Buffer*

Gradient: Time (min)	% B
0	0
1	0
21	100
23	100
24	0

Flow Rate: 1 mL/min
Temperature: 30 °C
Detection: UV @ 280 nm
Sample: Cetuximab, biosimilar expressed in HEK

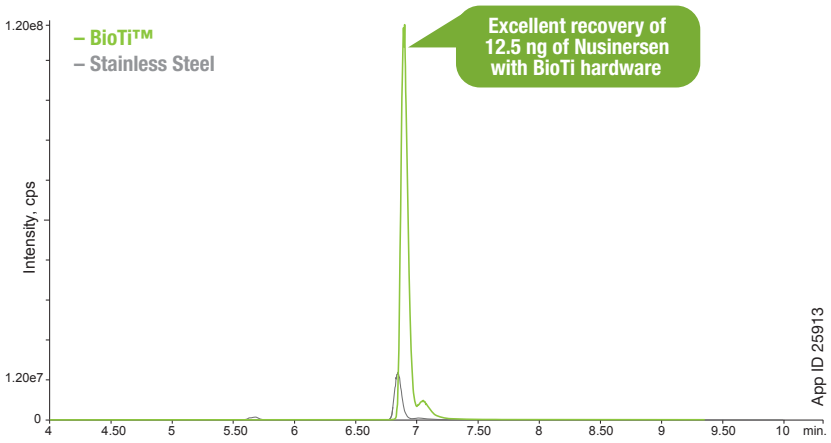
Cetuximab (pH Gradient Buffer)



Oligonucleotide Analysis

Biozen Oligo uniquely combines improved efficiency from its core-shell morphology and high pH stability necessary for oligonucleotide separations. It is packed in BioTi™ hardware to mitigate non-specific interactions that lead to analyte loss, distortions in peak shape and carryover. Confidently maximize resolution and reproducibility, even under the most demanding and extreme method conditions with Biozen Oligo.

BioTi versus Traditional Stainless Steel Hardware



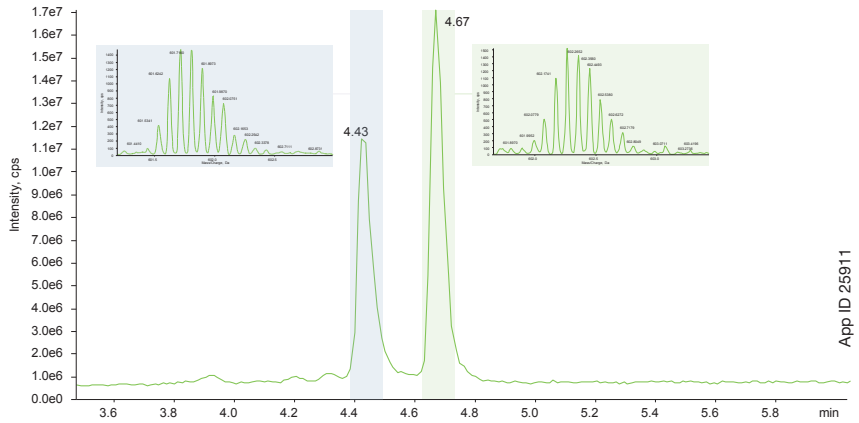
LC Conditions

Column: Biozen 2.6 µm Oligo (BioTi)
Clarity 2.6 µm Oligo XT (stainless steel)
Dimension: 100 x 2.1 mm
Part No.: 00D 4790 AN (Biozen)
00D 4746 AN (Clarity)
Mobile Phase: A: 10 mM Hexylamine in Water + 12.5 mM Hexafluoro 2 propanol
B: 10 mM Hexylamine in Methanol + 12.5 mM Hexafluoro 2 propanol

Gradient	Time (min)	% B
	0	25
	2	25
	16	75
	16.1	95
	20	95
	20.1	25

Flow Rate: 0.3 mL/min
Injection Volume: 2 µL (12.5 ng)
Temperature: 55 °C (Intact)
Instrument: Shimadzu® LC LC 20A Prominence
Detection: TOF-MS
Detector: SCIEX® TripleTOF® 6600

LC-MS Analysis of siRNA using BioTi UHPLC Hardware



Achieve clear separation between sense and antisense strands.

LC Conditions

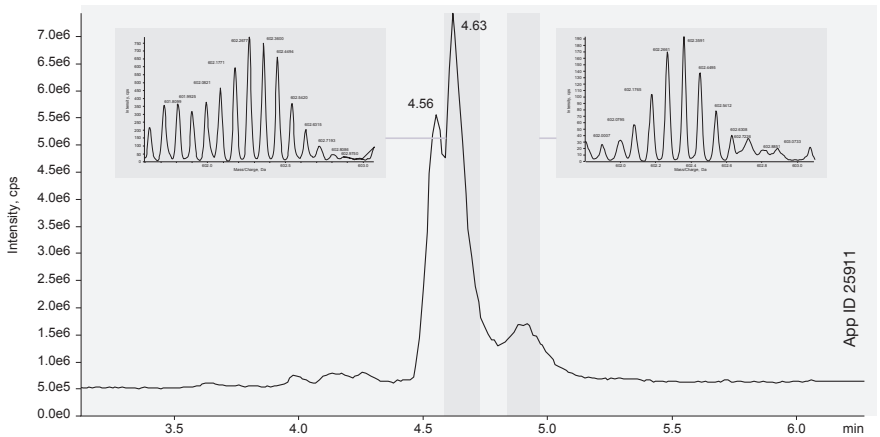
Column: Biozen 2.6 µm Oligo (BioTi)
Clarity 2.6 µm Oligo XT (stainless steel)
Dimension: 100 x 2.1 mm
Part No.: 00D 4790 AN (Biozen)
00D 4746 AN (Clarity)
Mobile Phase: A: 4 mM Triethylamine in Water + 12.5 mM Hexafluoro 2 propanol
B: 4 mM Triethylamine in Methanol + 12.5 mM Hexafluoro 2 propanol

Gradient	Time (min)	% B
	0	5
	2	5
	16	30
	16.1	95
	20	95
	20.1	25

Flow Rate: 0.3 mL/min
Injection Volume: 2 µL (12.5 ng)
Temperature: 55 °C (Intact)
Instrument: Shimadzu LC 20A Prominence
Detection: TOF-MS
Detector: SCIEX TripleTOF 6600

Vs

LC-MS Analysis of siRNA using Stainless Steel UHPLC Hardware

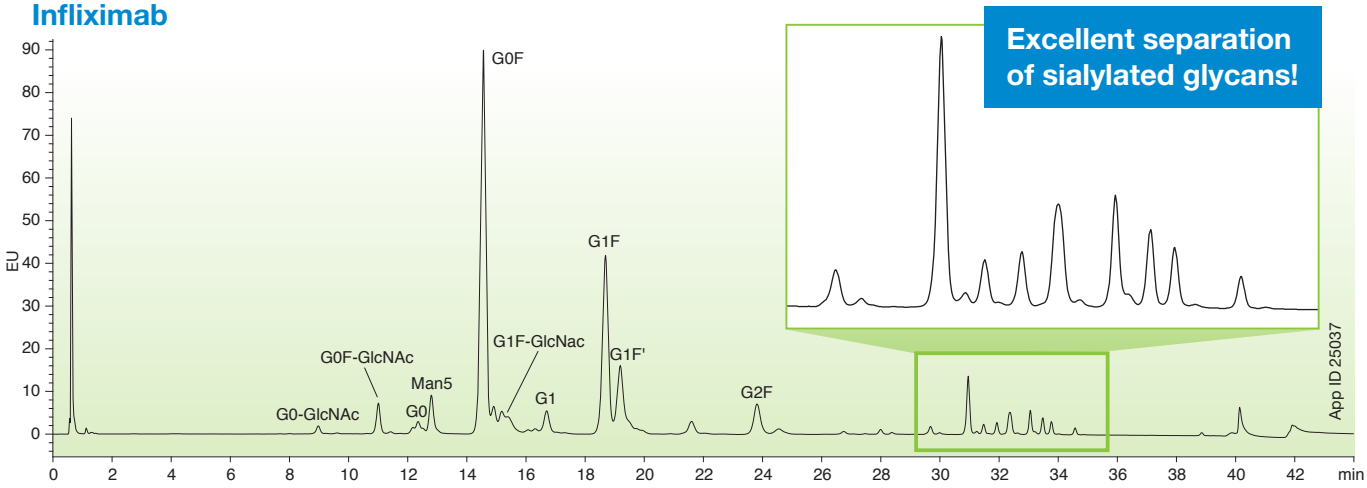


Observe Bimodal peaks within antisense strand due to stainless steel interactions

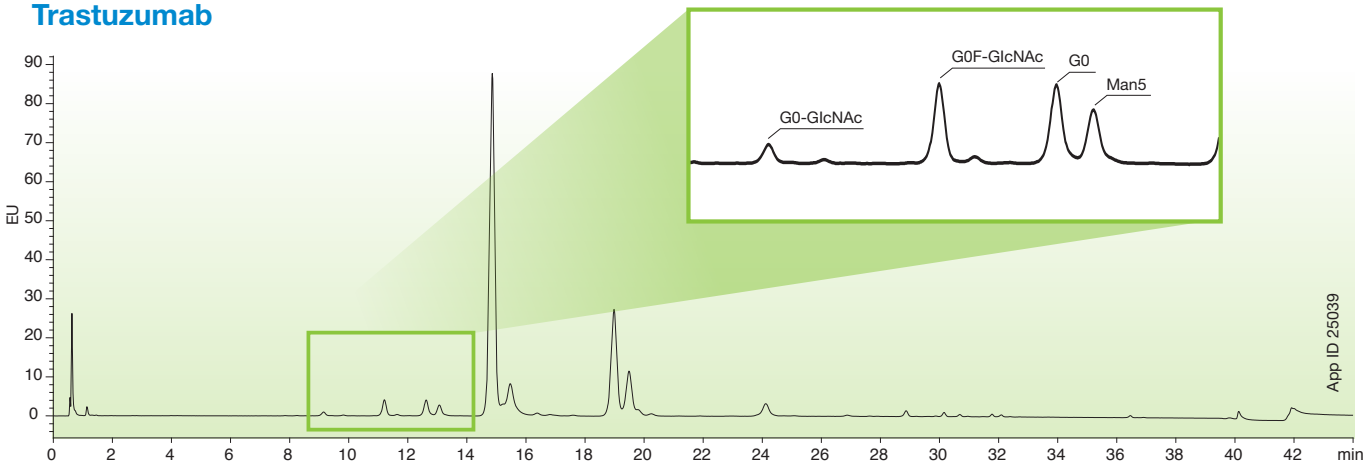
Glycan Analysis

Biozen Glycan's unique selectivity was designed to resolve highly chemically similar sugar moieties of released and labeled N- and O-linked glycans. With a 2.6 µm core-shell particle, both HPLC and UHPLC systems can benefit from its high efficiency particle to achieve narrower peaks with faster run times. Under HILIC-FLR or HILIC-MS conditions, Biozen Glycan excels with increased polar retention and selectivity to enable reproducible characterization of your biotherapeutic's glycosylation profile.

Infliximab



Trastuzumab

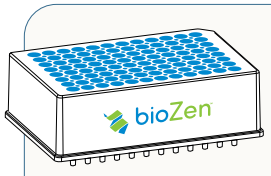


Conditions for both columns:

Column: Biozen 2.6 µm Glycan
Dimensions: 150 x 2.1 mm
Part No.: 00F-4773-AN
Mobile Phase: A: 100 mM Ammonium Formate, pH 4.5
B: Acetonitrile

Gradient: Time (min)	% B
0	78
10	74.5
24	72
38.5	55.9
38.6	40
40.6	40
40.7	78
48	78

Flow Rate: 0.5 mL/min
Temperature: 50 °C
Detection: FLD ex/em 285/345 nm
Sample: As noted



Biozen N-Glycan Clean-Up

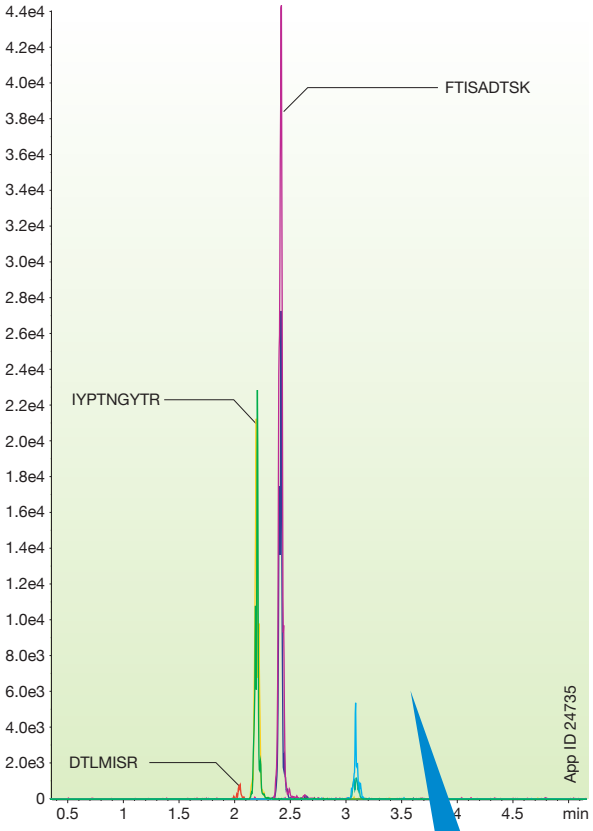
Novel solid phase extraction (SPE) HILIC stationary phase that excels at retaining and recovering labeled, released N-glycans. Available in microelution 96-well plate format that works well for processing and clean-up of limited sample volumes.

www.phenomenex.com/GlycanSPE

Peptide Quantitation

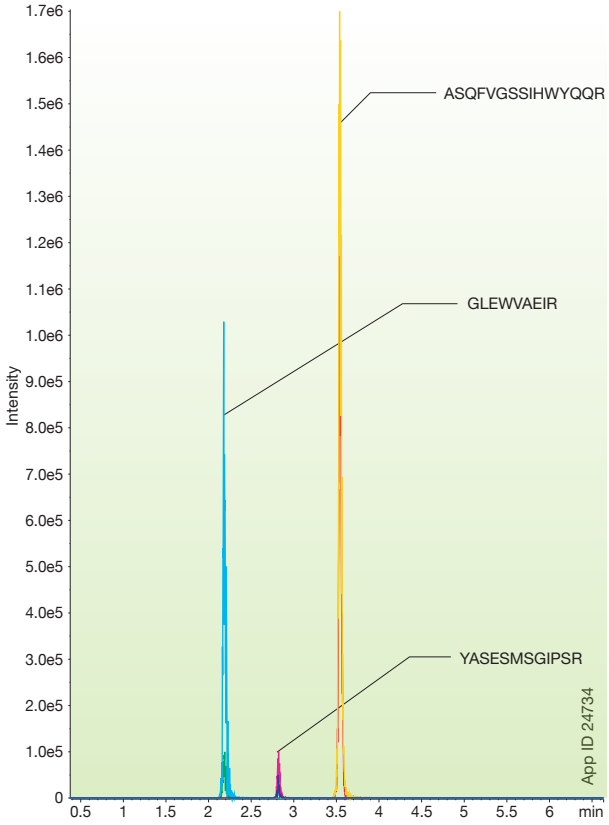
Biozen Peptide columns deliver orthogonal selectivities for highly chemically similar peptides. In addition to providing excellent peak capacity and higher sample loads for improved detection of low-level analytes, both peptide columns improve overall peak shape by minimizing unwanted secondary interactions of basic peptides. Biozen Peptide XB-C18 blocks secondary interactions via isobutyl side chains, while Biozen Peptide PS-C18 contains a positively charged weak base to improve peak shape, especially for basic peptides.

Kadcyla
(4 Signature Peptides)



Excellent peak symmetry and height make quantification of low-level peptides with PS-C18 efficient.

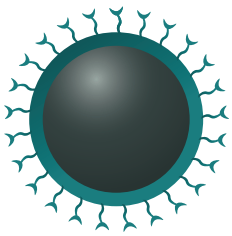
Infliximab
(3 Signature Peptides)



Conditions for both samples:

Column:	Biozen 3 µm Peptide PS-C18	
Dimensions:	50 x 2.1 mm	
Part No.:	00B-4771-AN	
Mobile Phase:	A: 0.1 % Formic Acid in Water	
	B: 0.1 % Formic Acid in Acetonitrile	
Gradient:	**Time (min)**	**% B**
	0	3
	1	3
	4.5	25
Flow Rate:	0.5 mL/min	
Temperature:	22 °C	
LC System:	ExionLC™ AD HPLC	
Detection:	MS/MS	
Detector:	SCIEX™ QTRAP® 5500	
Sample:	As noted	

Magnetic Bead Clean-up Available



Streptavidin Coated

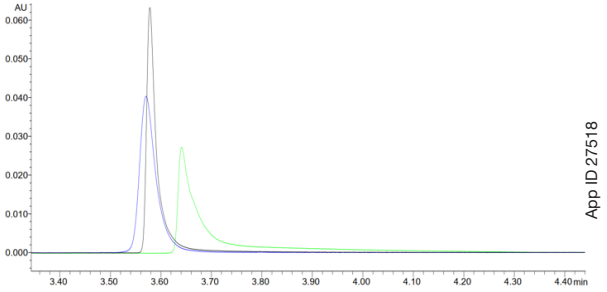
Biozen MagBeads utilize magnetic particles to offer higher binding capacity relative to traditional extraction techniques, resulting in a faster more reliable purification, clean-up, and isolation of proteins and peptides.

Intact & Subunit Analysis

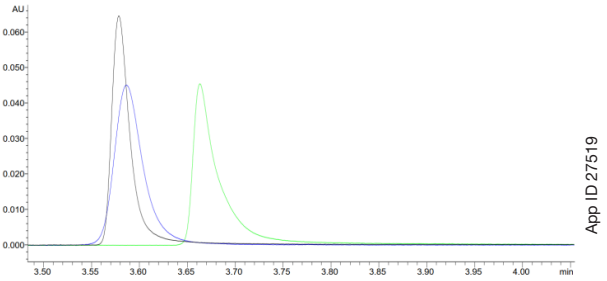
Impurity profiling and characterization of intact proteins and their subunits are challenging because of the need to identify small differences between variants. Both Biozen intact columns are designed to offer faster mass transfer kinetics of large biomolecules through a large pore core-shell particle that facilitates narrower, taller peaks to achieve higher resolution between target HC/LC, Fc/Fab, and chemically similar isoforms.

Improved Peak Shape of Intact Trastuzumab, Cetuximab and Infliximab vs Fully Porous Equivalents

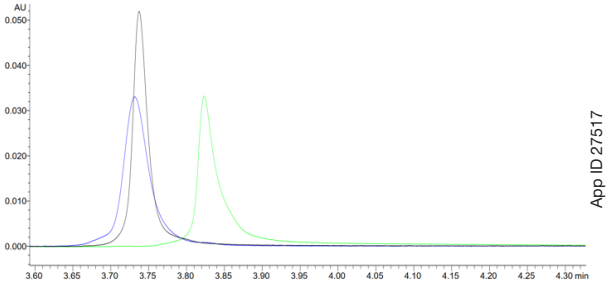
Trastuzumab



Infliximab



Cetuximab



Method Conditions for Intact (top) and Reduced (bottom) Data:

Column: Biozen 2.6 µm Widepore C4
XBridge® 2.5 µm Protein BEH C4
AdvanceBio® 3.5 µm RP-mAb C4

Dimension: 100 x 2.1 mm

Part No.: 00D-4786-AN

Mobile Phase: A: 0.1 % Trifluoroacetic Acid in Water
B: 0.1 % Trifluoroacetic Acid in Acetonitrile

Gradient	Intact Time (min)	Intact % B	Reduced Time (min)	Reduced % B
	0	20	0	5
	1	20	0.5	5
	6	70	5.5	50
	7	70	6.5	50
	7.1	20	6.6	5
	10	20	9	5

Flow Rate: 0.5 mL/min (Intact) 0.8 mL/min (Reduced)

Injection Volume: 1 µL

Temperature: 70 °C (Intact)
80 °C (Reduced)

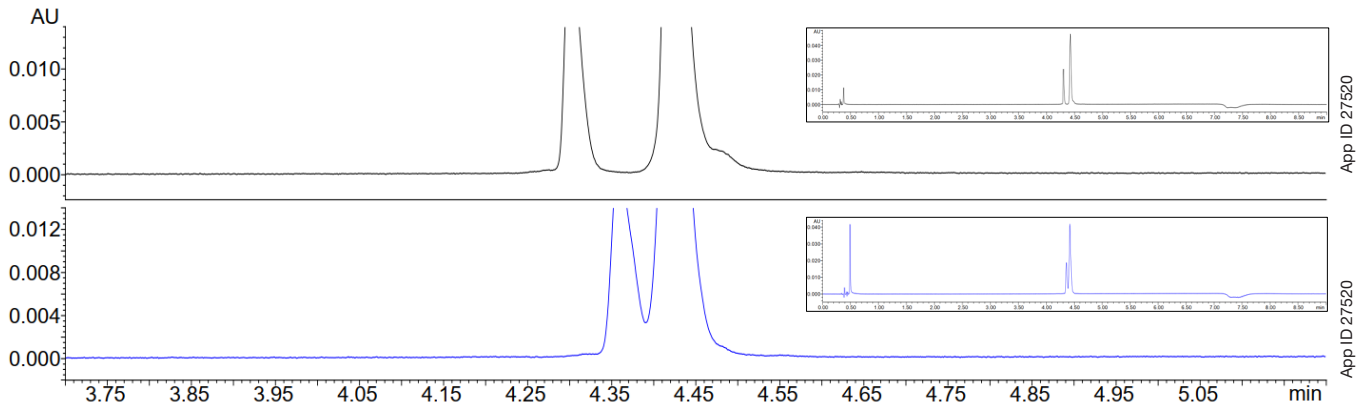
Instrument: Waters® ACQUITY® H-Class

Detection: UV @ 280 nm

Sample: 1. Cetuximab
2. Infliximab
3. Trastuzumab

- Biozen 2.6 um Widepore C4
- XBridge 2.5 um Protein BEH C4
- AdvanceBio 3.5 um RP-mAb C4

Improved Resolution of Reduced Infliximab vs Fully Porous Equivalents

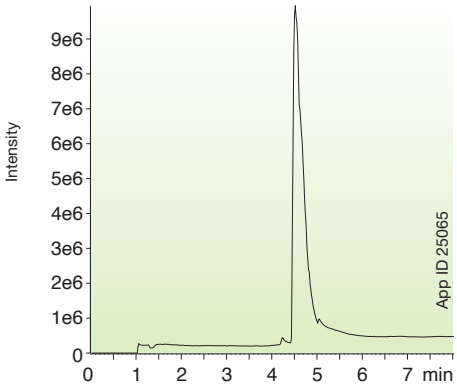


Intact Mass Analysis

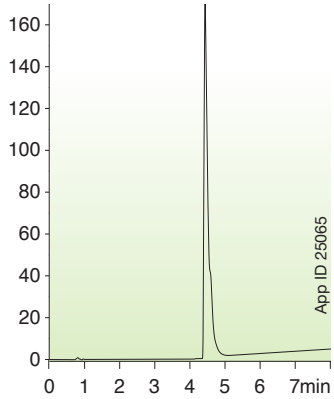
Mass spectrometric analysis of intact proteins provides pivotal information required by regulatory agencies to ensure protein drug efficacy. Analysis offers accurate molecular weight information about the protein as well as relative abundance of its isoforms which often serves as a benchmark for characterizing further variabilities in PTMs, protein sequence, impurities and degradation products. Biozen WidePore C4 and Intact XB-C8 offer orthogonal selecitivies to facilitate fast run times and sharp peak shapes during MS characterization.

Intact Mass of Trastuzumab using a Biozen Intact XB-C8

TIC



UV

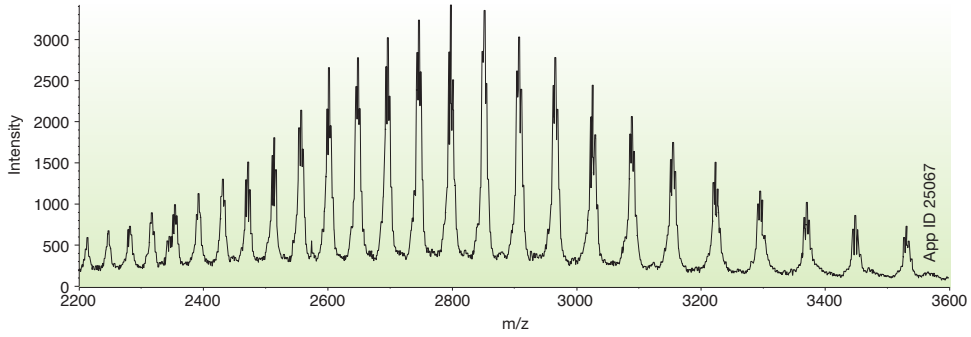


Columns: Biozen 3.6 µm Intact XB-C8
Dimension: 150 x 2.1 mm
Part No.: 00F-4766-AN
Mobile Phase: A: 0.1 % Formic Acid in Water
B: 0.1 % Formic Acid in Acetonitrile / Isopropyl alcohol (50:50)

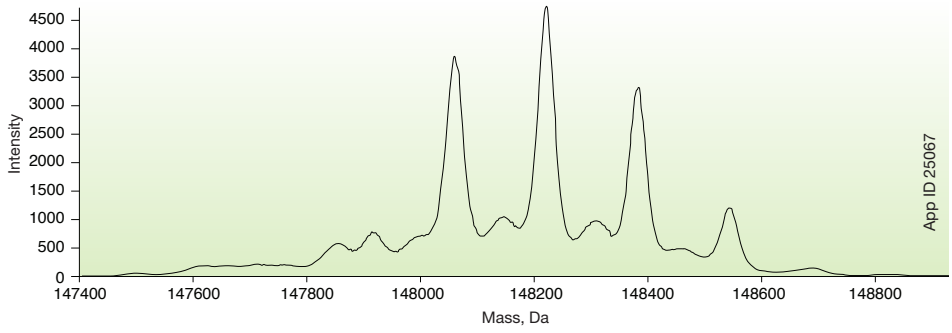
Gradient:	**Time (min)**	**% B**
	2.5	20
	10	65
	10.1	95

Flow Rate: 0.3 mL/min
Temperature: 90 °C
Detection: Sciex® X500B QTOF
Sample: Trastuzumab

Spectra



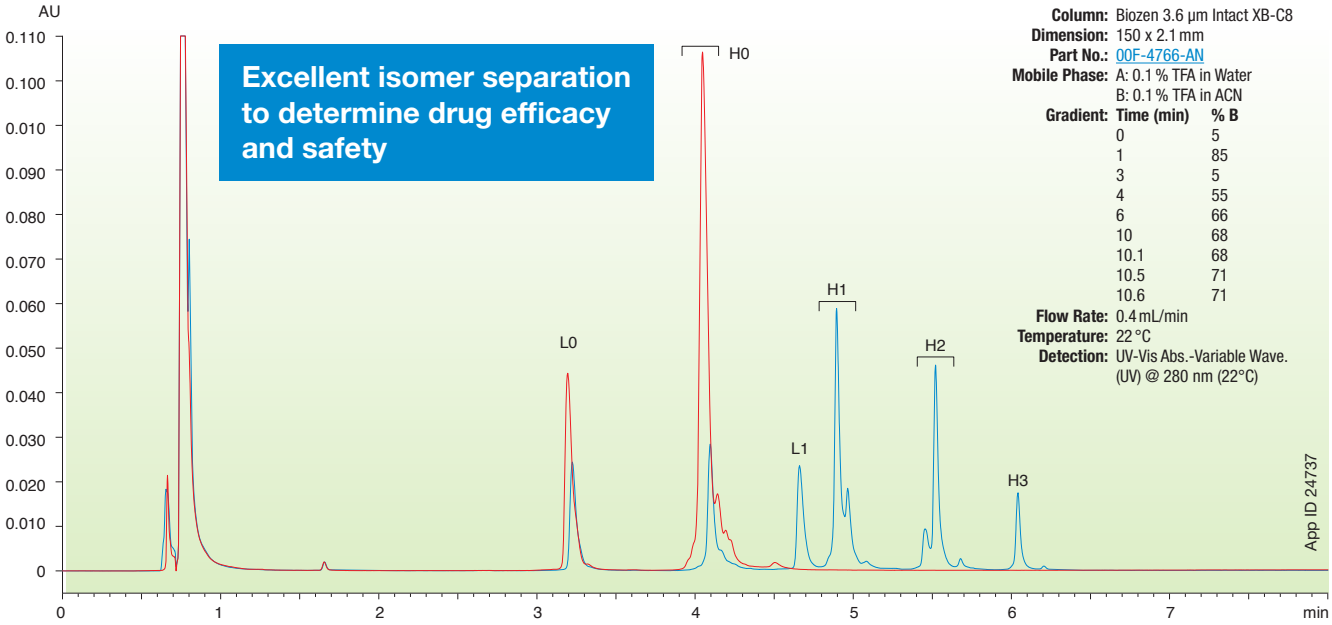
Deconvoluted Spectra



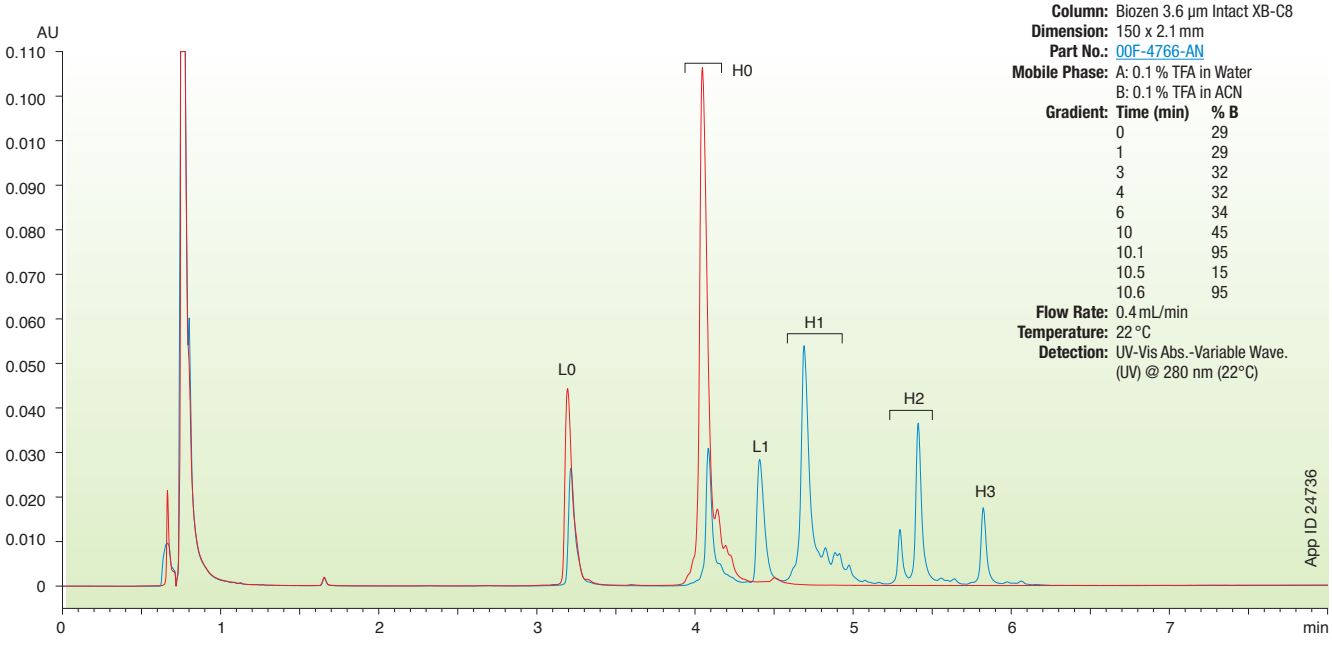
Drug to Antibody Ratio (DAR)

The drug-to-antibody ratio of ADCs must be well understood to determine drug efficacy and safety. Biozen Intact XB-C8 determining drug load distribution and DAR for cysteine conjugated mAbs. With the ease of reverse phase method development combined with the resolving power of a moderately retentive, core-shell particle stationary phase, Biozen XB-C8 offers optimum separation and recovery between DAR species.

Herceptin—vcMMAE using Biozen 3.6 µm Intact XB-C8



Herceptin—mcMMAF using Biozen 3.6 µm Intact XB-C8



Sample Preparation Solutions & Vials

Oligonucleotide Extraction

Clarity OTX™ Solid Phase Extraction (SPE)

Prior to LC-MS analysis, therapeutic oligonucleotides must be isolated from interferences such as salts, sugars, large proteins, and genomic DNA. Using a mixed-mode solid phase extraction (SPE) sorbent in conjunction with carefully formulated buffers, Clarity OTX consistently reduces matrix effects and delivers high recoveries.

- Works for desalting and clean up of biological samples
- Formulated buffer solutions available for optimal performance
- Quick, simple 4-step protocols for rapid LC-MS/MS results
- No liquid-liquid extractions (LLE)

- Available in 96-well plate in 2 mg, 25 mg, 100 mg and 500 mg formats

Clarity™ Biosolutions

N-Glycan Clean Up

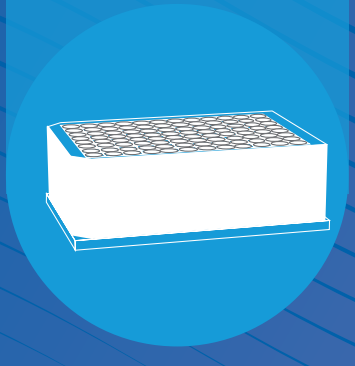
Biozen N-Glycan Clean-up SPE

Novel solid phase extraction (SPE) HILIC stationary phase that streamlines processing and clean-up of small volume samples to achieve high retention and recovery of labeled, released N-glycan compounds.

- Small volume format allows for more concentrated samples
- Minimal elution solvent
- Excellent retention and recovery of labeled, released N-glycans
- Faster, simple 5-step clean-up protocol to save on sample clean-up time

- Available in 96-well plate in 5 mg format

Biozen™ by Phenomenex



Immunocapture for Peptide Mapping

Biozen MagBeads Streptavidin Coated

Ideal for the purification, clean up, and isolation of proteins and peptide molecules using a paramagnetic affinity bead with a streptavidin coated surface. Magnetic beads offer a rapid solution compared to traditional sample preparation options by maximizing binding capacity with a uniform particle for accurate and reliable results in less time.

- Excellent for binding biotinylated capture antibodies
- Prevents ligand inactivation through non-specific binding correct formatting issue
- Improved recovery and accuracy
- >200 pmol biotin/mg binding capacity

- Available in 25mg, 50mg, and 500mg formats

Biozen™ by Phenomenex

High Recovery & Biocompatible Vials

Verex™ Certified Vials

All Verex products are fully lot-tested and certified. Available in various certifications and formats to address your testing needs.

- 8 different vial formats to maximize sample recovery
- Polypropylene vials designed to mitigate non-specific binding to achieve high sample recoveries
- Compatible with all major LC vendors and ANSI-certified vial plates

- Standard, low-bleed and ultra-clean certifications to accommodate application demands
- Various formats and dimensions available to accommodate desired total and residual sample volumes

Verex™ Certified Vial Products

Find your Biopharma Resources Online

Biozen™ by Phenomenex

www.Phenomenex.com

Pheno Webinars

Find a Relevant Webinar to walk you through Method Development

Search Hundreds of Relevant Applications

Request a Size Exclusion Screening from our PhenoLogix Laboratory

Chat with a Live Technical Expert 24/7

Find Sample Prep and Accessories Products to fit into your Workflow

Product Ordering Information

Biozen™ Products - Powered by Biocompatible Hardware

	Biozen Columns (mm)						Guard Columns		
	50 x 2.1	150 x 2.1	150 x 4.6	300 x 4.6	150 x 7.8	300 x 7.8	30 x 2.1	30 x 4.6	40 x 7.8
NEW Biozen 3 µm dSEC-7	—	00F-4789-AN	00F-4789-E0	00H-4789-E0	—	—	03A-4789-AN	03A-4789-E0	—
Biozen 1.8 µm dSEC-2	00B-4787-AN	00F-4787-AN	00F-4787-E0	00H-4787-E0	—	—	—	03A-4788-E0	—
Biozen 3 µm dSEC-2	—	—	00F-4788-E0	00H-4788-E0	00F-4788-K0	00H-4788-K0	—	03A-4788-E0	03Q-4788-K0

	Biozen Columns (mm)									Biocompatible Guard Cartridges		
	50 x 2.1	100 x 2.1	150 x 2.1	250 x 2.1	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	300 x 4.6	for 2.1 mm	for 4.6 mm	Holder
										/3pk	/3pk	ea
Biozen 2.6 µm Glycan	00B-4773-AN	00D-4773-AN	00F-4773-AN	—	—	—	—	—	—	AJ0-9800	—	AJ0-9000
Biozen 1.6 µm Peptide PS-C18	00B-4770-AN	00D-4770-AN	00F-4770-AN	—	—	—	—	—	—	AJ0-9803	—	AJ0-9000
Biozen 3 µm Peptide PS-C18	00B-4771-AN	—	00F-4771-AN	—	00B-4771-E0	—	00F-4771-E0	—	—	AJ0-7605*	AJ0-7606*	KJ0-4282
Biozen 1.7 µm Peptide XB-C18	00B-4774-AN	00D-4774-AN	00F-4774-AN	—	—	—	—	—	—	AJ0-9806	—	AJ0-9000
Biozen 2.6 µm Peptide XB-C18	00B-4768-AN	00D-4768-AN	00F-4768-AN	00G-4768-AN	00B-4768-E0	—	00F-4768-E0	—	—	AJ0-9806	AJ0-9808	AJ0-9000
Biozen 2.6 µm WidePore C4	00B-4786-AN	00D-4786-AN	00F-4786-AN	—	00B-4786-E0	00D-4786-E0	00F-4786-E0	00G-4786-E0	—	AJ0-9816	AJ0-9818	AJ0-9000
Biozen 3.6 µm Intact XB-C8	00B-4766-AN	00D-4766-AN	00F-4766-AN	—	00B-4766-E0	—	00F-4766-E0	—	—	AJ0-9812	AJ0-9814	AJ0-9000
Biozen 6 µm WCX	00B-4777-AN	00D-4777-AN	00F-4777-AN	00G-4777-AN	00B-4777-E0	00D-4777-E0	00F-4777-E0	00G-4777-E0	—	AJ0-9400*	AJ0-9401*	KJ0-4282
Biozen 1.7 µm Oligo	00B-4791-AN	00D-4791-AN	00F-4791-AN	—	—	—	—	—	—	AJ0-9820	AJ0-9822	AJ0-9000
Biozen 2.6 µm Oligo	00B-4790-AN	00D-4790-AN	00F-4790-AN	—	00B-4790-E0	00D-4790-E0	00F-4790-E0	—	—	AJ0-9820	AJ0-9822	KJ0-9000
Biozen 1.8 µm SEC-3	00B-4772-AN	—	00F-4772-AN	—	—	00D-4772-E0	00F-4772-E0	—	00H-4772-E0	—	AJ0-9851	AJ0-9000

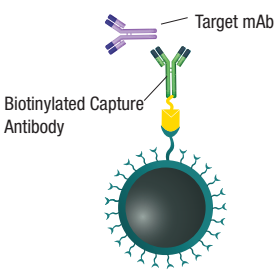
*10/pk

Sample Preparation

Biozen Solid Phase Extraction	Format	Sorbent Mass	Part Number	Unit
Biozen N-Glycan Clean-Up	Microelution 96-Well Plate	5 mg/well	8M-S009-NGA	1/box

Biozen MagBeads Streptavidin Coated

Formats	Part No.	Concentration	Bead Size
25 mg (≈50 samples) 50 mg (≈100 samples) 500 mg (≈1000 samples)	KS0-9531 KS0-9532 KS0-9533	20 mg/mL	1.0 µm



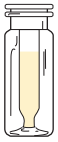
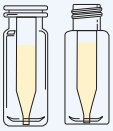
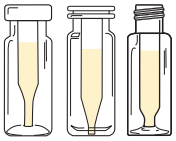
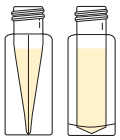
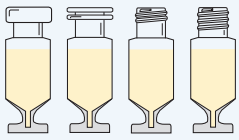
BE-HAPPY™ GUARANTEE

Your happiness is our mission. Take 45 days to try our products. If you are not happy, we'll make it right.
www.phenomenex.com/behappy

Product Ordering Information

Clarity OTX			
Part No.	**Description**		**Unit**
KS0-8494	Clarity OTX Starter Kit- Tubes	Includes: 100 mg/3 mL cartridges (x50) Lysis-loading buffer (100 mL) Equilibration buffer (250 mL) Wash buffer (350 mL) Elution buffer (100 mL)	ea
KS0-9253	Clarity OTX Starter Kit- 96-Well Plate	100 mg/ 96-well plate (x1) Lysis-loading buffer (100 mL) Equilibration buffer (250 mL) Wash buffer (350 mL) Elution buffer (100 mL)	ea
8M-S103-4GA	Clarity OTX Microelution Well Plate	2 mg/ well	1/box
8E-S103-CGA	Clarity OTX Well Plate	25 mg/ well	1/box
8E-S103-EGA	Clarity OTX Well Plate	100 mg/ well	1/box
8B-S103-EBJ	Clarity OTX Cartridge	100 mg/3 mL	50/box
8B-S103-HCH	Clarity OTX Cartridge	500 mg/6 mL	30/box
AL0-8579	Clarity OTX Lysis-Loading Buffer V2.0	1 L	ea

Verex 12 x 32 mm Limited Volume Specialty Vials and Kits

	Type and Description	Finish	Material	Total Volume	Residual Volume	Available as	Page Number	Part Numbers
	High-Recovery CD Vial Center-draining	9 mm Screw Thread	Glass	1.5 mL	< 20 µL	Convenience Kits (certified and regular)	37 37 36 36	AR0-9981-13 AR0-9982-13 AR0-9985-13-C AR0-9986-13-C
	Max-Recovery CD Vial Center-draining	11 mm Snap or 9 mm Screw Thread	Glass	1.5 mL	< 2 µL	Vials (regular) Convenience Kits (certified)	34 36 36	AR0-3680-12 AR0-9987-13-C AR0-9988-13-C
	Insert Vial µVial i2V	11 mm Snap	Glass	500 µL	< 2 µL	Vials (regular)	34 34	AR0-3630-13 AR0-3631-13
	Insert Vial µVial i3 (Qsert)	11 mm Snap or 9 mm Screw Thread	Glass	300 µL	< 4 µL	Convenience Kits (certified and regular)	34 34 37 37 36	AR0-9671-13 AR0-9672-13 AR0-9973-13 AR0-9974-13 AR0-9974-13-C
	Insert Vial µVial i3 (Qsert)	11 mm Crimp or 11 mm Snap or 9 mm Screw Thread	Glass	475 µL	< 4 µL	Vials (regular)	34 33 33 37 37	AR0-3625-13 AR0-3725-13 AR0-3726-13 AR0-3920-13 AR0-3921-13
	Insert Vial µVial i3 (Qsert)	10 mm Screw Thread	Glass	450 µL	< 2 µL	Vials (regular)	40 40	AR0-3020-13 AR0-3021-13
	Plastic Vial	9 mm Screw Thread	Polypropyl-ene	1.7 mL 700 µL 300 µL	< 2 µL	Vials (certified and regular)	37	AR0-39P0-13 AR0-39P1-13 AR0-39P2-13
	Micro Vial with Tapered Base v-Vial	11 mm Crimp or 11 mm Snap or 9 mm Screw Thread or 10 mm Screw Thread	Glass	1.5 mL	< 4 µL	Vials (regular)	40 34 34 33 33 37 37	AR0-3040-13 AR0-3640-13 AR0-3641-12 AR0-3740-13 AR0-3741-13 AR0-3940-13 AR0-3941-13

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