Sepax Technologies

Sepax Technologies, Inc.

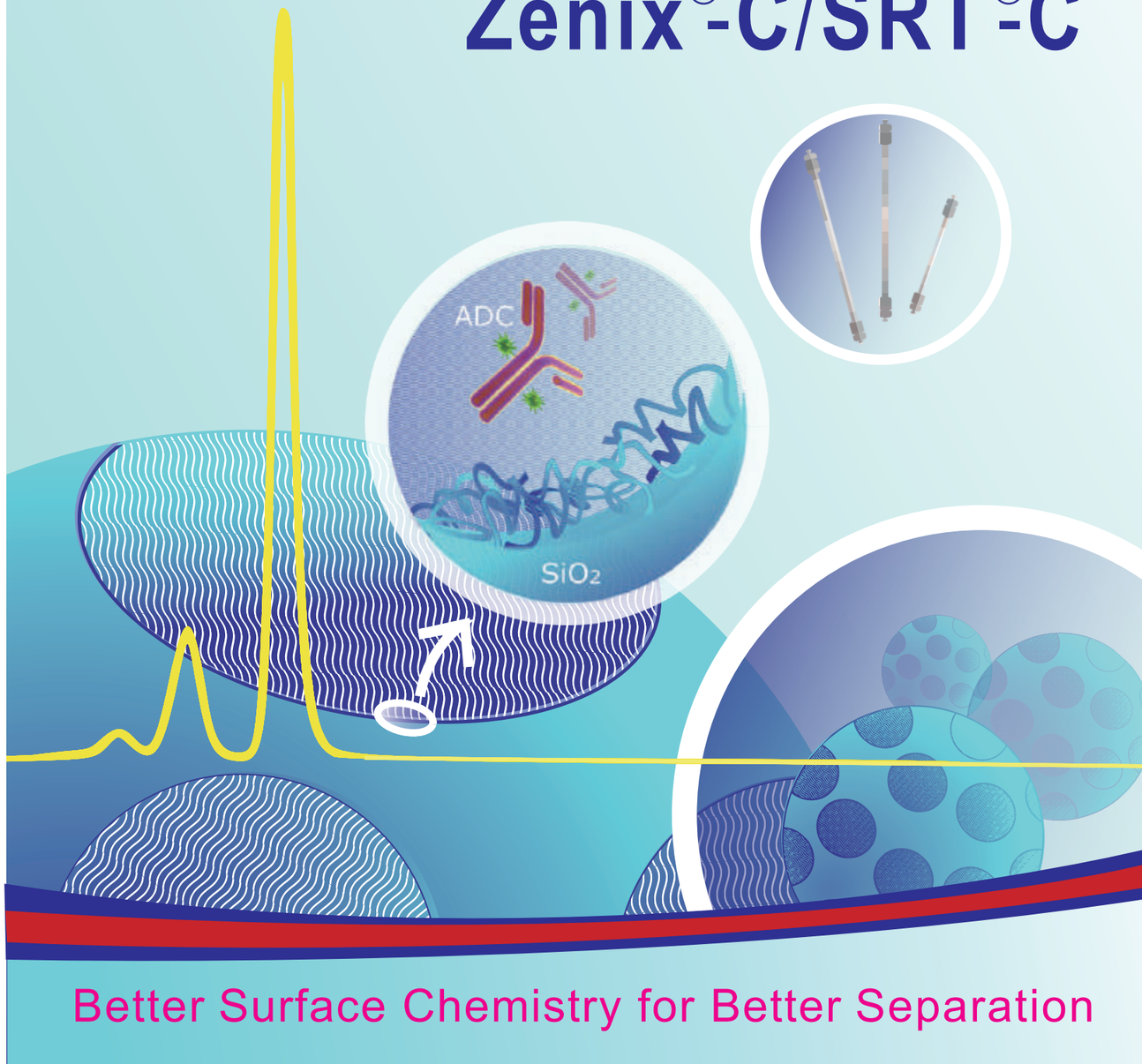
5 Innovation Way,
Newark, Delaware, USA
Tel: (302)366-1101
Fax: (302)366-1151
Toll Free: 1-877-SEPAX-US
www.sepax-tech.com
Printed August 2018

QUALITY SYSTEM CERTIFICATION ISO 9001:2008 DNV

# Size Exclusion Chromatography

Sepax Technologies

# Zenix®-C/SRT®-C




## Better Surface Chemistry for Better Separation

# Sepax Technologies, Inc.

Sepax Technologies, Inc. develops and manufactures products in the area of chemical and biological separations, biosurfaces and proteomics. Sepax product portfolio includes 1) liquid chromatography columns and media, 2) SPE and Flash chromatography columns and tubes, 3) bulk resin for preparative separation and process chromatography, and 4) natural product and Chinese traditional medicine separation and purification.


## *Leader in Biological Separations*

Sepax develops and manufactures 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 from non-porous to 2000 Å. Unique and proprietary resin synthesis and surface technologies have been developed for solving the separation challenges in biological area.


## *Bioseparation Products*

Size Exclusion
SRT®
SRT®-C
Nanofilm®
Zenix®
Zenix®-C

Ion Exchange
Proteomix® IEX
Antibodix®WCX

Hydrophobic Interaction
Proteomix®HIC

Carbohydrate Separation
Carbomix®

Analytical, Semi-prep and Preparative

# Zenix®-C/SRT®-C SEC Phases

## *Complimentary Phases to Zenix and SRT for Hydrophobic Biomolecules*

## *General Description*

### *Zenix®-C and SRT®-C SEC phases*

Developed based on innovative surface coating technology comprised of uniform, hydrophilic, and neutral nanometer thick films chemically bonded on high purity and mechanically stabilized silica. Two different types of coating chemistries, Zenix and SRT, stand-up monolayer bonded on porous silica, and Zenix-C and SRT-C, lay-down monolayer on porous silica offer ideal phase structures for sample type specific separation. The 3 µm based Zenix and Zenix-C, and 5 µm based SRT and SRT-C allow high resolution and performance separation. The combination of these four lines of SEC phases provides a powerful total solution for robust, reproducible and highest resolution size based separation of biological molecules in the market.

## *Featured Characteristics*

- Highest capacity and resolution
- High lot-to-lot reproducibility
- High protein recovery with intact biological activity
- Negligible non-specific interactions
- Ideal for separation and analysis of hydrophobic proteins and monoclonal antibodies derivatized with polymer branches
- Suitable for separation and analysis of general biological samples

## *Stationary Phase Structure*

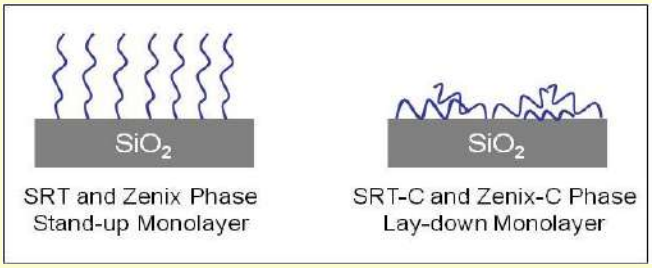



Figure 1. Phase structure difference: a monolayer stands up on the silica surface for Zenix and SRT, and a monolayer lays down on the silica surface for Zenix-C and SRT-C.

## *Difference in Particle Size*

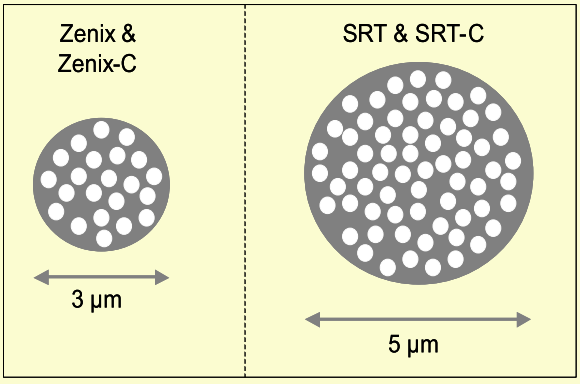



Figure 2. Zenix and Zenix-C are based on 3 µm porous silica. SRT and SRT-C are based on 5 µm porous silica.

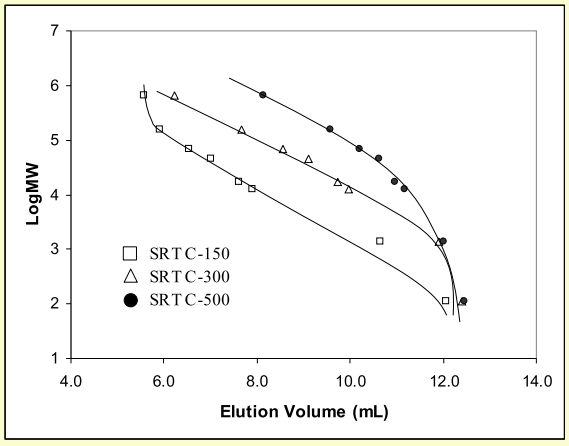
## *Key features of Sepax SEC phases*

| Characteristics | SRT | Zenix | SRT-C | Zenix-C |
|---|---|---|---|---|
| **Particle size** | 5 µm | 3 µm | 5 µm | 3 µm |
| **Pore size (Å)** | 100, 150, 300, 500, 1000 & 2000 | 80, 100, 150, 300 | 100, 150, 300, 500, 1000 & 2000 | 80, 100, 150, 300 |
| **Resolution** | High | Higher, short column for faster separation | High | Higher, short column for faster separation |
| **Surface structure** | Chemically bonded stand-up monolayer | | Chemically bonded lay-down monolayer | |
| **Recommended Sample Types** | Monoclonal antibodies, proteins, peptides, nucleic acids, oligonucleotides, virus, and water-soluble polymers | | "Tough samples" such as *hydrophobic samples* like insulin, membrane protein, antibody drug conjugates, proteins conjugated with hydrophobic molecules. | |

## *Protein Molecular Weight Calibration*

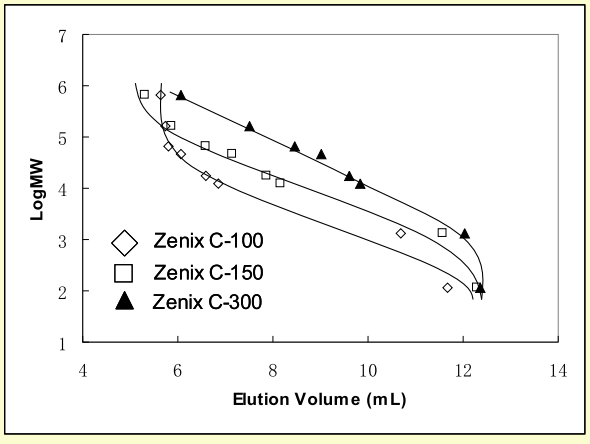
Protein molecular weight vs elution volume is plotted in Figure 3-4, indicating that SRT-C 150, 300, and 500, and Zenix-C 80, 100, 150, and 300 have large linear elution region.

Figure 3. Protein MW Calibration with Elution Volume for SRT-C Phases




Columns: SRT-C (5 µm, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 214 nm
Injection volume: 10 µL
Samples: 1. Thyroglobulin, 670 kD; 2. γ-Globulin, 158 kD; 3. BSA, 66 kD; 4. Ovalbumin, 44 kD; 5. Myoglobin, 17.6 kD; 6. Ribonuclease A, 13.7 kD; 7. Vitamin B12, 1.35 kD; 8. Uracil, 120 D

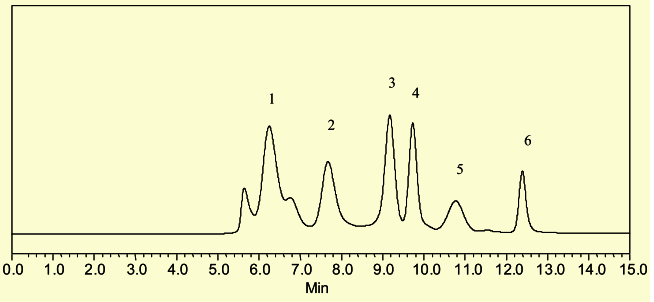
Figure 4. Protein MW Calibration with Elution Volume for Zenix-C Phases




Columns: Zenix-C (3 µm, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 214 nm
Injection volume: 10 µL
Samples: 1. Thyroglobulin, 670 kD; 2. γ-Globulin, 158 kD; 3. BSA, 66 kD; 4. Ovalbumin, 44 kD; 5. Myoglobin, 17.6 kD;

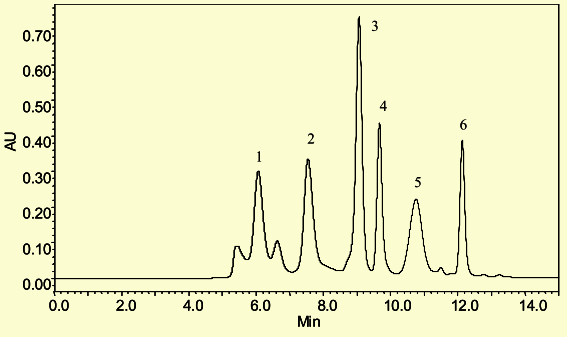
## *Column Performance with Protein Standards*

Figure 5. Separation of Protein Standards by SRT-C SEC-300 Column



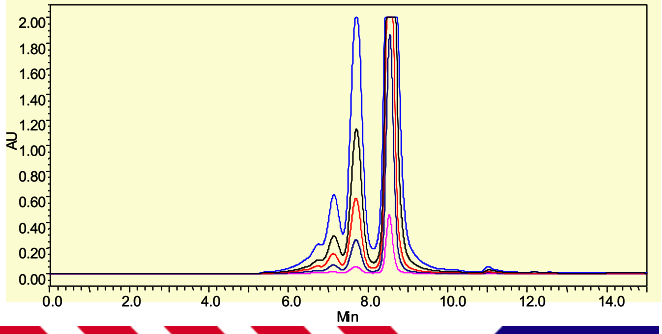

Column: SRT-C SEC-300 (5 µm, 300 Å 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 214 nm
Injection: 10 µL
Sample: 1. Thyroglobulin, 670kD; 2. γ-Globulin, 158 kD; 3. Ovalbumin, 44kD; 4. Myoglobin, 17.6 kD; 5. Poly-DL-alanine (1-5 kD); 6. Uracil, 120 D.

Figure 6. Separation of a Protein Standards by Zenix-C SEC-300 column



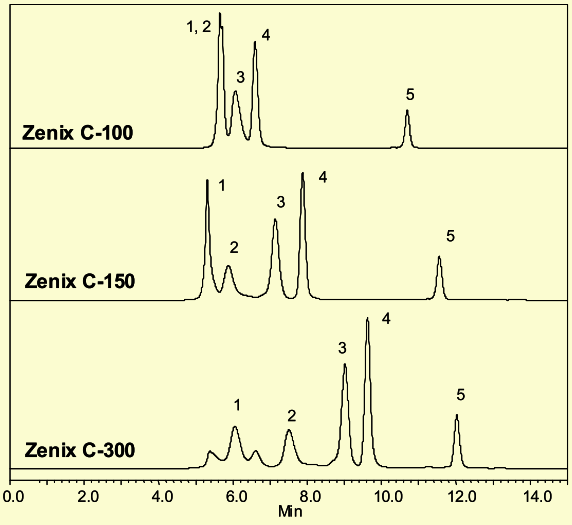

Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 214 nm
Injection: 10 µL
Sample: 1) Thyroglobulin, 670 kD; 2) γ-Globulin, 158 kD; 3) Ovalbumin, 44 kD; 4) Myoglobin, 17.6 kD; 5) Poly-DL-alanine (1-5 kD); 6) Vitamin B12, 1.35 kD.

Figure 7. BSA Loading Test on a Zenix-C SEC-300 Column



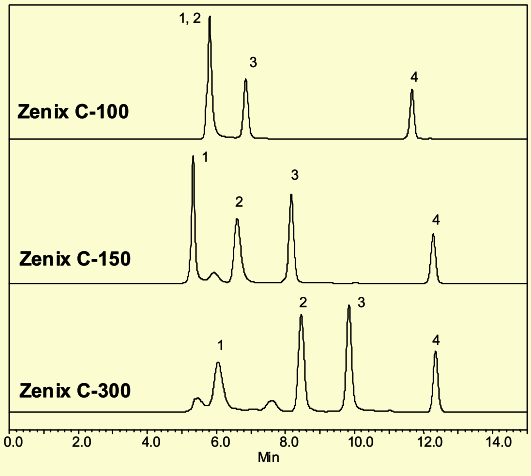
Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 214 nm
Injection: 10 µL
BSA concentration: 1, 5, 10, 25, and 50 mg/mL (from low to high)

Figure 8. Separation of Biorad Protein Standards by Zenix-C SEC-100, 150 and 300 Columns




Columns: Zenix-C SEC (3 µm, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 214 nm
Injection: 10 µL
Sample: 1. Thyroglobulin, 670 kD; 2. γ-Globulin, 158 kD; 3. Ovalbumin, 44 kD; 4. Myoglobulin, 16.9 kD; 5. Vitamin B12, 1.35 kD.

Figure 9. Separation of Protein Standards A by Zenix-C SEC-100, 150 and 300 Columns



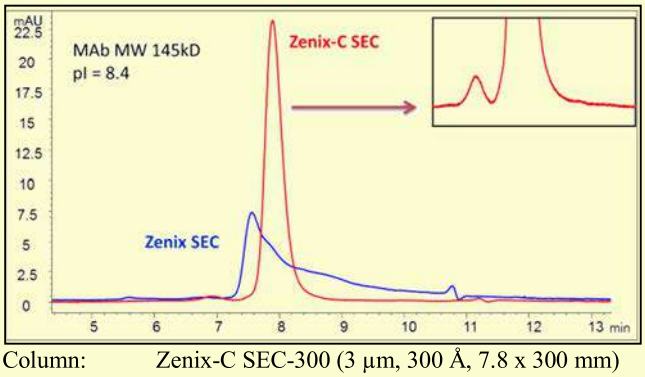

Column: Zenix-C SEC (3 µm, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 214 nm
Injection: 10 µL
Sample: 1. Thyroglobulin, 670 kD; 2. BSA, 66 kD; 3. Ribonuclease A, 13.7 kD, and 4. Uracil, 120 D.

## *Applications*

Zenix-C and SRT-C SEC phases provide better recovery and separation for hydrophobic biomolecules, which have secondary interaction with traditional resin surfaces due to the hydrophobic property. Different mobile phase additives such as organics, like IPA, arginine sodium perchlorate and acetonitrile, can improve the sample recovery and separation resolution depending on individual hydrophobic biomolecule. Applications on the separation of hydrophobic molecules like Antibody Drug Conjugate (ADC), Fusion Protein, PEGylated Protein, Membrane Protein and Peptide on Zenix-C and SRT-C SEC columns were illustrated in the following Figure 10-31.

### Hydrophobic Monoclonal Antibody (MAb)

Figure 10. SEC Screening for Monoclonal Antibody F.

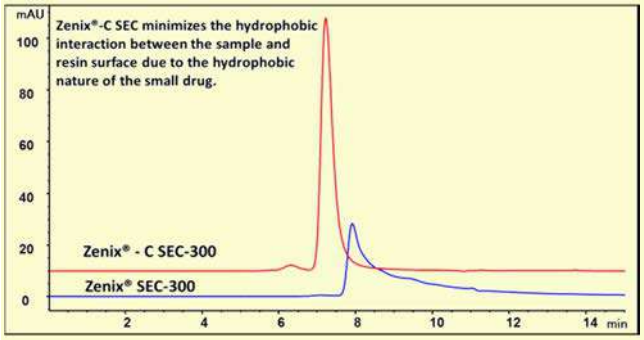



Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate, pH 7.0
Flow rate: 1.0 mL/min
Detection: UV 280 nm
Temperature: Ambient
Injection: 10 µL
Sample: 1.23 mg/mL MAb F in 10 mM sodium succinate, pH 5.0

### Antibody Drug Conjugate (ADC)

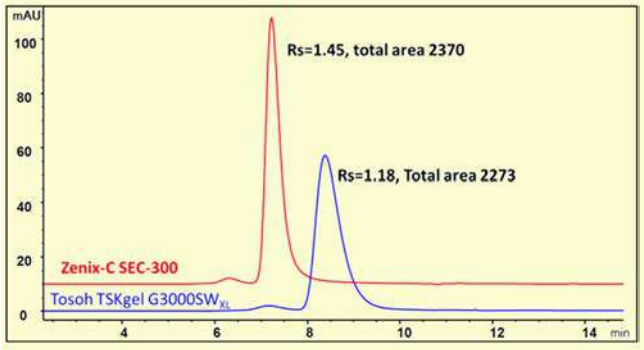
Zenix-C SEC phase offers better recovery and separation for Antibody Drug Conjugate (ADC), which has secondary interaction with traditional resin surfaces due to its hydrophobic property from the conjugated small drugs. Different mobile phase additives such as organics, like IPA, arginine sodium perchlorate and acetonitrile, can improve the sample recovery and separation resolution depending on individual ADCs. Smaller pore size Zenix-C SEC is proven to be beneficial in free drug analysis, which can be in line with mass spectrometry with volatile mobile phases.

Figure 11. Herceptin Lysine ADC Analysis




Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1 mL/min
Detection: UV 280 nm
Temperature: Ambient
Injection: 10 µL
Samples: Herceptin lysine conjugate 2.05 mg/mL

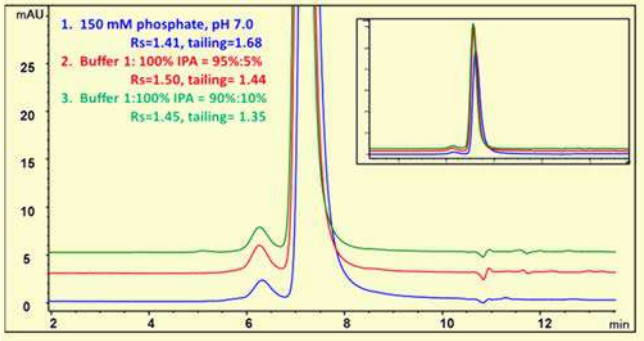
Figure 12. Herceptin Lysine ADC Analysis on Zenix-C SEC-300 vs. Tosoh TSKgel G3000SWXL




Column: Zenix - C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Tosoh TSKgel G3000SWXL(5 µm, 250 Å, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1 mL/min
Detection: UV 280 nm
Temperature: Ambient
Injection: 10 µL
Samples: Herceptin lysine drug conjugate 2.05 mg/mL

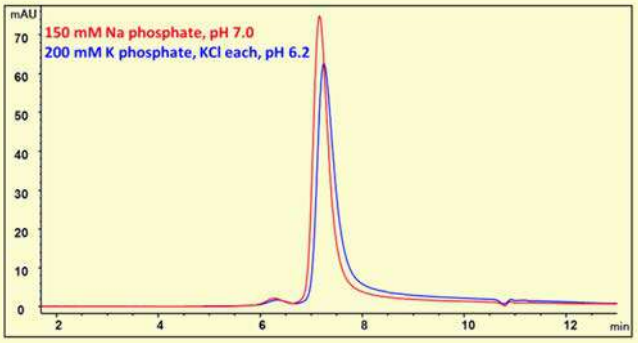


Figure 13. Herceptin Lysine ADC Analysis - Organic Modifier



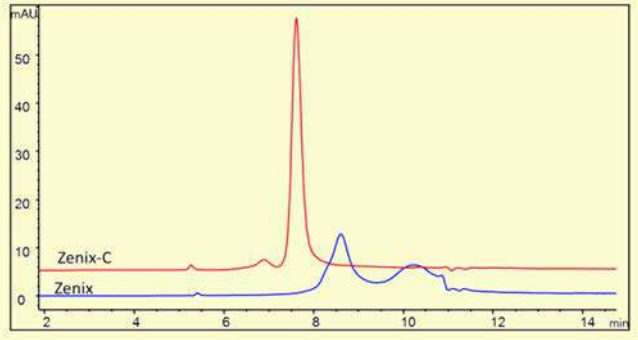

Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: As indicated
Flow rate: 1 mL/min
Detection: UV 280 nm
Temperature: Ambient
Injection: 10 µL
Samples: Herceptin lysine conjugate 2.05 mg/mL

Figure 14. Herceptin lysine ADC Analysis - Salt Difference



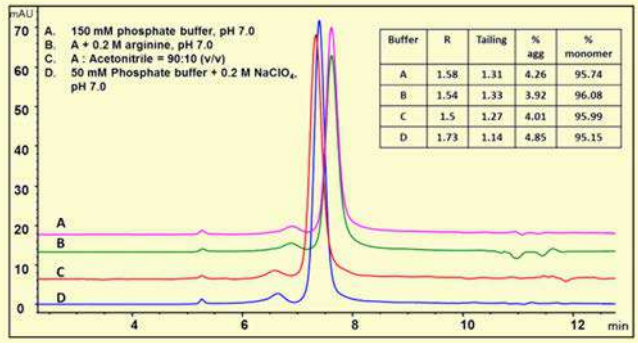

Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: As indicated
Flow rate: 1 mL/min
Detection: UV 214 nm
Temperature: Ambient
Injection: 10 µL
Samples: Herceptin lysine ADC 2.05 mg/mL

Figure 15. Cysteine ADC Analysis - SEC Phase Comparison



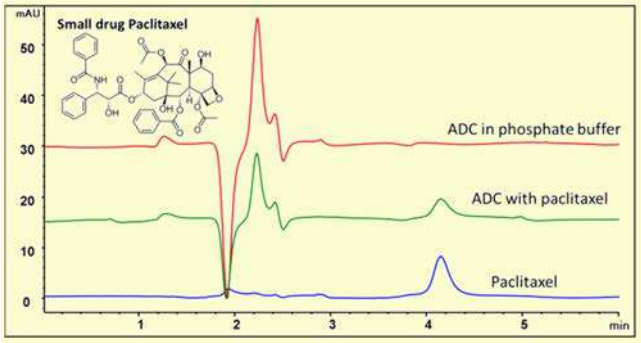

Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1 mL/min
Detection: UV 280 nm
Temperature: Ambient
Injection: 20 µL
Samples: 1.68 mg/mL ADC

Figure 16. Cysteine ADC Analysis - Mobile Phase Difference



Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: As indicated
Flow rate: 1 mL/min
Detection: UV 280 nm
Temperature: Ambient
Injection: 20 µL
Samples: 1.68 mg/mL ADC

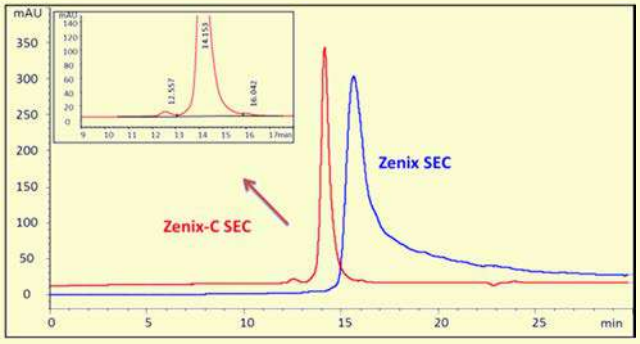
Figure 17. ADC and Free Drug Paclitaxel Analysis




Column: Zenix-C SEC-80 (3 µm, 80 Å, 4.6 x 50 mm)
Mobile phase: 50 mM NH4Ac : ACN = 80 : 20 ( v/v )
Flow rate: 0.3 mL/min
Detection: UV 228 nm
Temperature: 25 ℃
Injection: 2 µL
Samples: As indicated

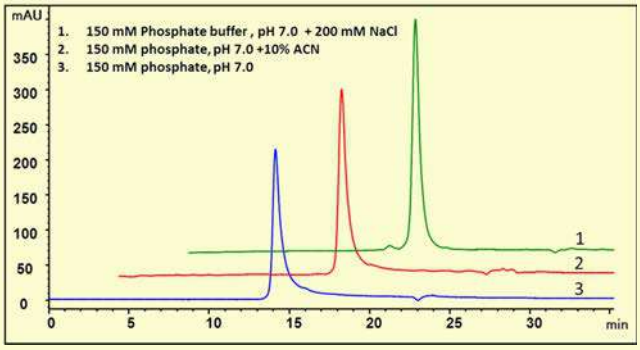
## Fusion Protein and Peptide

Figure 18. Fusion Protein Analysis



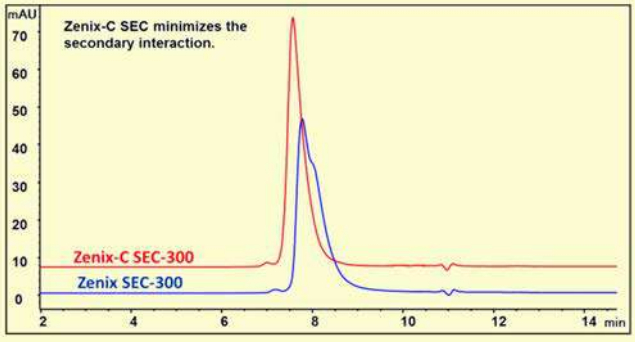

Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer (pH 7.0) + 200 mM NaCl
Flow rate: 0.5 mL/min
Detection: UV 214 nm
Temperature: Ambient
Injection: 10 µL
Samples: 1 mg/mL IBI302, MW 170 kD, pI 6.8-7.0

Figure 19. Fusion Protein 3 - Mobile Phase Effect



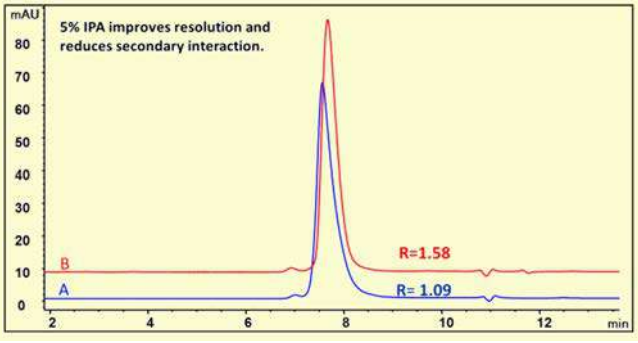

Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: As indicated
Flow rate: 0.5 mL/min
Detection: UV 214 nm
Temperature: Ambient
Volume: 10 µL
Samples: 1 mg/mL fusion protein, MW 170 kD, pI 6.8-7.0
10% retention time offset for presentation purpose

Figure 20. HSA Conjugated Peptide - SEC Phase Comparison



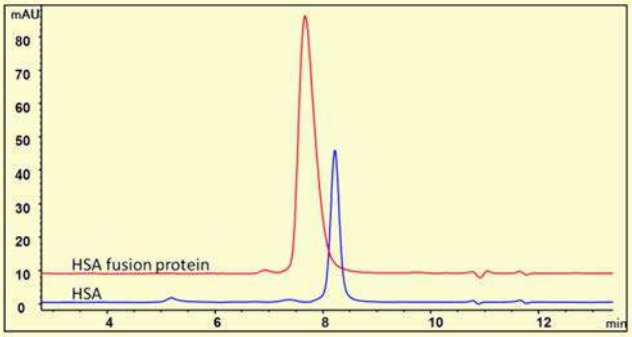

Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1.0 mL/min
Detection: UV 280 nm
Temperature: Ambient
Injection: 10 µL
Samples: HSA fusion peptide 5 mg/mL (MW 75 kD, pI 5.0, HSA conjugated peptide in diabetes treatment)

Figure 21. HSA Conjugated Peptide - Mobile Phase Effect



Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: A. 150 mM sodium phosphate buffer, pH 7.0, B: 150 mM Phosphate buffer (pH 7.0) : IPA = 95 : 5 (v/v)
Flow rate: 1.0 mL/min
Detection: UV 280 nm
Temperature: Ambient
Injection: 10 µL
Samples: HSA fusion peptide 5 mg/mL (MW 75 kD, pI 5.0, HSA conjugated peptide in diabetes treatment)

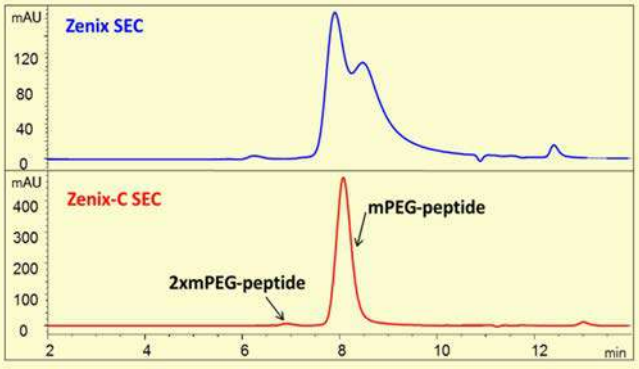
Figure 22. HSA Conjugated Peptide *vs* HSA




Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer (pH 7.0) : IPA = 95 : 5 (v/v)
Flow rate: 1.0 mL/min
Detection: UV 280 nm
Temperature: Ambient
Injection: 10 µL
Samples: HSA fusion peptide 5 mg/mL (MW 75 kD, pI 5.0, HSA conjugated peptide in diabetes treatment), HSA 2 mg/mL

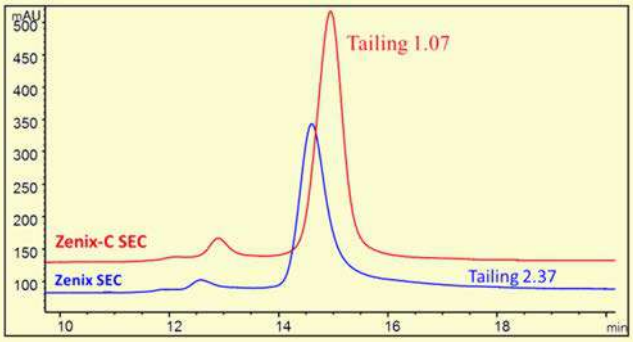
## PEGylated Protein and Peptide

Figure 23. mPEG-peptide (20 kD PEG + 4 kD peptide)




Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 150 mM sodium phosphate buffer, pH 7.0
Flow rate: 1.0 mL/min
Temperature: Ambient
Detection: UV 214 nm
Injection: 10 µL
Sample: mPEG-peptide concentration is 6 mg/Ml

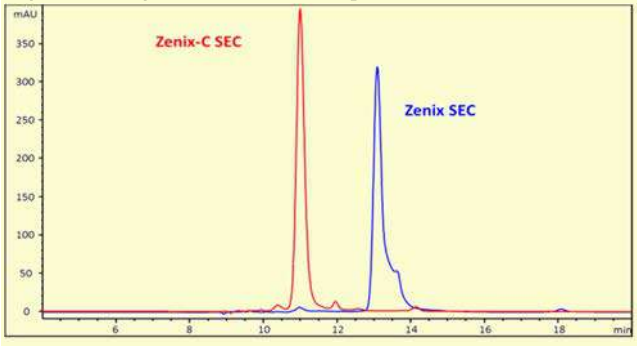
Figure 24. PEGylated Exenatide Separation




Column: Zenix-C SEC-300 (3 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 50 mM $CH_3COONH_4$ : ACN = 90 : 10 (v/v)
Flow rate: 0.5 mL/min
Temperature: Ambient
Detection: UV 214 nm
Injection: 15 µL
Pressure: 42 bar
Sample: 3.3 mg/mL PEG-Exanatide in water (PEG 23 kD)

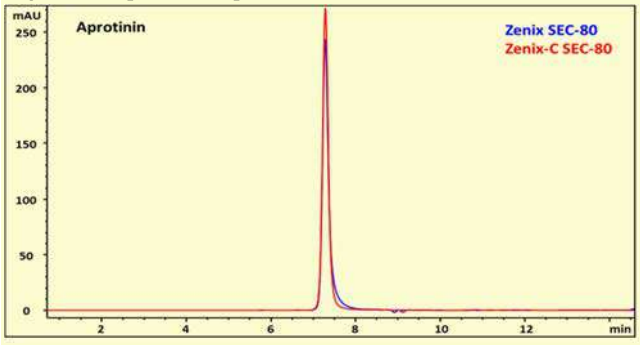
## Peptide Separation

Figure 25. Angiotensin I Acetate Separation




Column: Zenix-C SEC-80 (3 µm, 80 Å, 7.8 x 300 mm)
Flow rate: 1 mL/min
Temperature: Ambient
Detection: UV 214
Mobile phase: 150 mM sodium phosphate buffer pH 7.0
Injection: 5 µL

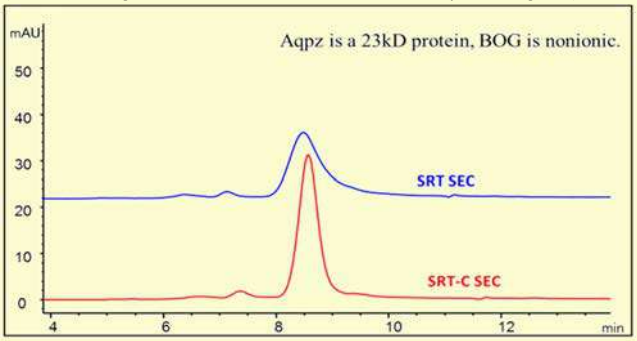
Figure 26. Aprotinin Separation



Column: Zenix-C SEC-80 (3 µm, 80 Å, 7.8 x 300 mm)
Flow rate: 1 mL/min
Temperature: Ambient
Detection: UV 214
Mobile phase: 150 mM sodium phosphate buffer pH 7.0
Injection: 5 µL

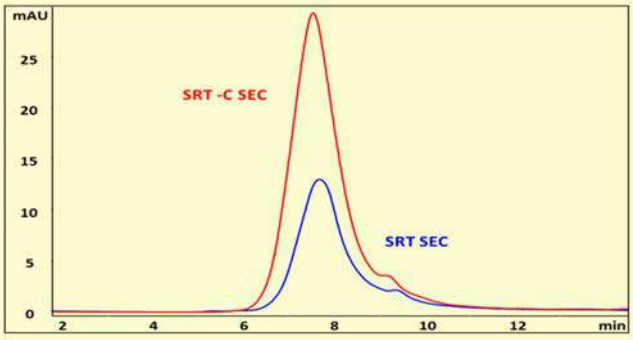
## Membrane Protein

Figure 27. Membrane Protein Aqpz Separation
(Acknowledgement: Brad Bennett at University of Virginia)



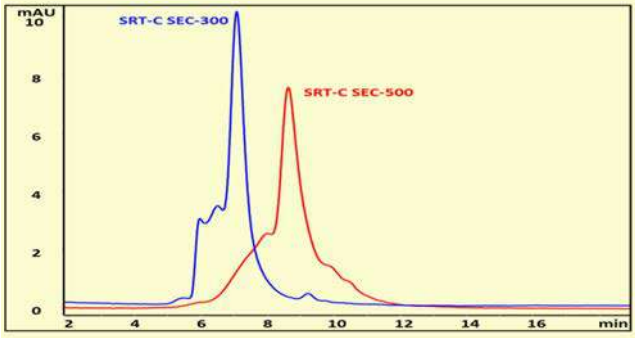

Column: SRT-C SEC-300 (5 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 20 mM TrisHCl, pH 7.0, 190 mM NaCl, 10 mM KCl, 40 mM Octyl glucoside
Flow rate: 1 mL/min
Temperature: Ambient
Detection: UV280 nm
Injection: 2 mL of 6 mg/mL

Figure 28. Bacterial K Channel (16 kD homotetramer) in 0.261% DDM (n-dodecyl-b-D-Maltoside)
(Acknowledgement: Sung Lee at Scripps)



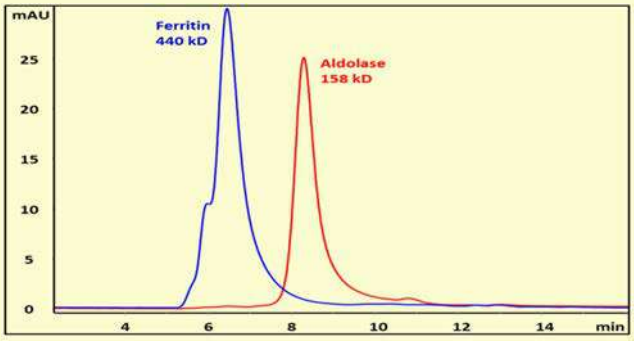

Column: SRT-C SEC-300 (5 µm, 300 Å, 4.6 x 300 mm)
Mobile phase: 20 mM Tris pH 7.5, 20 mM NaCl, 0.261% DDM
Flow rate: 0.35 mL/min
Temperature: Ambient
Detection: UV280 nm

Figure 29. Bacterial ABC Transporter (65 kD homodimer) in 0.1% UDM(β-undecylmaltoside)



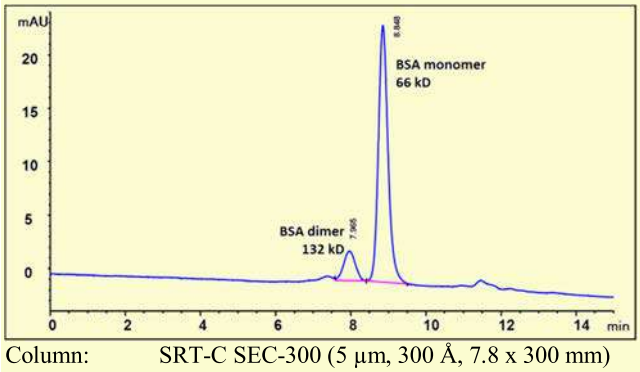

Column: SRT-C SEC-300 (5 µm, 300 Å, 4.6 x 300 mm)
SRT-C SEC-500 (5 µm, 300 Å, 4.6 x 300 mm)
Mobile phase: 20 mM Tris pH 7.5, 20 mM NaCl, 0.1% UDM
Flow rate: 0.35 mL/min
Temperature: Ambient
Detection: UV280 nm, AKTA FPLC system

Figure 30. Ferritin and Aldolase in 0.261% DDM (n-dodecyl-b-D-Maltoside) (Acknowledgement: Sung Lee at Scripps)




Column: SRT-C SEC-300 (5 µm, 300 Å, 4.6 x 300 mm)
Mobile phase: 20 mM Tris pH 7.5, 20 mM NaCl, 0.261% DDM
Flow Rate: 0.35 mL/min
Temperature: Ambient
Detection: UV280 nm; AKTA FPLC system

Figure 31. BSA in 0.02% TDM (Tridecyl-β-maltoside)




Column: SRT-C SEC-300 (5 µm, 300 Å, 7.8 x 300 mm)
Mobile phase: 50mM HEPES, pH7.5, 500mM NaCl, 0.02% TDM, 2% Glycerol
Flow rate: 1 mL/min
Temperature: Ambient
Detection: UV 280 nm
Temperature: 25 ℃
Samples: 20 µL BSA 1mg/mL in mobile phase

## *SRT-C Technical Specifications*

| Phase | SRT-C SEC-100 | SRT-C SEC-150 | SRT-C SEC-300 |
|---|---|---|---|
| Material | Neutral, hydrophilic film bonded silica | Neutral, hydrophilic film bonded silica | Neutral, hydrophilic film bonded silica |
| Particle size | 5 μm | 5 μm | 5 μm |
| Pore size (Å) | ~ 100 | ~ 150 | ~ 300 |
| Protein MW range (native) | *100 - 100,000* | *500 - 150,000* | *5,000 – 1,250,000* |
| pH stability① | 2 – 8.5 | 2 – 8.5 | 2 – 8.5 |
| Backpressure (psi for a 7.8x300 mm)② | ~ 700 psi | ~ 700 psi | ~ 700 psi |
| Salt concentration range | 20 mM - 2.0 M | 20 mM - 2.0 M | 20 mM - 2.0 M |
| Mobile phase compatibility | Aqueous and organic | Aqueous and organic | Aqueous and organic |

| Phase | SRT-C SEC-500 | SRT-C SEC-1000 | SRT-C SEC-2000 |
|---|---|---|---|
| Material | Neutral, hydrophilic film bonded silica | Neutral, hydrophilic film bonded silica | Neutral, hydrophilic film bonded silica |
| Particle size | 5 μm | 5 μm | 5 μm |
| Pore size (Å) | ~ 500 | ~ 1000 | ~ 2000 |
| Protein MW range (native) | *15,000 – 5,000,000* | *50,000 – 7,500,000* | *> 10,000,000* |
| pH stability① | 2 – 8.5 | 2 – 8.5 | 2 – 8.5 |
| Backpressure (psi for a 7.8x300 mm)② | ~ 700 psi | ~ 700 psi | ~ 700 psi |
| Salt concentration range | 20 mM - 2.0 M | 20 mM - 2.0 M | 20 mM - 2.0 M |
| Mobile phase compatibility | Aqueous and organic | Aqueous and organic | Aqueous and organic |

## *Zenix-C Technical Specifications*

| Phase | Zenix-C SEC-80 | Zenix-C SEC-100 | Zenix-C SEC-150 | Zenix-C SEC-300 |
|---|---|---|---|---|
| Material | Neutral, hydrophilic film bonded silica | Neutral, hydrophilic film bonded silica | Neutral, hydrophilic film bonded silica | Neutral, hydrophilic film bonded silica |
| Particle size | 3 μm | 3 μm | 3 μm | 3 μm |
| Pore size (Å) | ~ 80 | ~ 100 | ~ 150 | ~ 300 |
| Protein MW range (native) | *100-50,000* | *100 - 100,000* | *500 - 150,000* | *5,000 – 1,250,000* |
| pH stability① | 2 - 8.5 | 2 - 8.5 | 2 - 8.5 | 2 - 8.5 |
| Backpressure for 7.8x300 mm (1.0 mL/min)② | ~1885 psi | ~ 1,500 psi | ~ 1,375 psi | ~ 1,100 psi |
| Backpressure for 4.6x300 mm (0.35 mL/min) | ~1450 psi | ~ 1,400 psi | ~ 1,250 psi | ~ 1,000 psi |
| Salt concentration range | 20 mM - 2.0 M | 20 mM - 2.0 M | 20 mM - 2.0 M | 20 mM - 2.0 M |
| Mobile phase compatibility | Aqueous and organic | Aqueous and organic | Aqueous and organic | Aqueous and organic |

① Store the column in neutral pH, or 20% ethanol in water
② Recommended maximum flow rate for 7.8 x 300 mm 1.5 ml/min

# Ordering Information

*Other dimension and pore size available upon request*

## SRT-C SEC Column

### SRT-C SEC-100 (5 µm, 100 Å)

| ID x Length (mm) | P/N |
|---|---|
| 7.8 x 300 | 235100-7830 |
| 7.8 x 50 (Guard) | 235100-7805 |
| 4.6 x 300 | 235100-4630 |
| 4.6 x 50 (Guard) | 235100-4605 |
| 10 x 300 | 235100-10030 |
| 21.2 x 300 | 235100-21230 |

### SRT-C SEC-150 (5 µm, 150 Å)

| ID x Length (mm) | P/N |
|---|---|
| 7.8 x 300 | 235150-7830 |
| 7.8 x 50 (Guard) | 235150-7805 |
| 4.6 x 300 | 235150-4630 |
| 4.6 x 50 (Guard) | 235150-4605 |
| 10 x 300 | 235150-10030 |
| 21.2 x 300 | 235150-21230 |

### SRT-C SEC-300 (5 µm, 300 Å)

| ID x Length (mm) | P/N |
|---|---|
| 7.8 x 300 | 235300-7830 |
| 7.8 x 50 (Guard) | 235300-7805 |
| 4.6 x 300 | 235300-4630 |
| 4.6 x 50 (Guard) | 235300-4605 |
| 10 x 300 | 235300-10030 |
| 21.2 x 300 | 235300-21230 |
| 10 x 300 | 233300-10030 |
| 21.2 x 300 | 233300-21230 |

### SRT-C SEC-500 (5 µm, 500 Å)

| ID x Length (mm) | P/N |
|---|---|
| 7.8 x 300 | 235500-7830 |
| 7.8 x 50 (Guard) | 235500-7805 |
| 4.6 x 300 | 235500-4630 |
| 4.6 x 50 (Guard) | 235500-4605 |
| 10 x 300 | 235500-10030 |
| 21.2 x 300 | 235500-21230 |

### SRT-C SEC-1000 (5 µm, 1000 Å)

| ID x Length (mm) | P/N |
|---|---|
| 7.8 x 300 | 235950-7830 |
| 7.8 x 50 (Guard) | 235950-7805 |
| 4.6 x 300 | 235950-4630 |
| 4.6 x 50 (Guard) | 235950-4605 |
| 10 x 300 | 235950-10030 |
| 21.2 x 300 | 235950-21230 |

### SRT-C SEC-2000 (5 µm, 2000 Å)

| ID x Length (mm) | P/N |
|---|---|
| 7.8 x 300 | 235980-7830 |
| 7.8 x 50 (Guard) | 235980-7805 |
| 4.6 x 300 | 235980-4630 |
| 4.6 x 50 (Guard) | 235980-4605 |
| 10 x 300 | 235980-10030 |
| 21.2 x 300 | 235980-21230 |

## Zenix-C SEC Column

### Zenix-C SEC-80 (3 µm, 80 Å)

| ID x Length (mm) | P/N |
|---|---|
| 7.8 x 300 | 233080-7830 |
| 7.8 x 50 (Guard) | 233080-7805 |
| 4.6 x 300 | 233080-4630 |
| 4.6 x 50 (Guard) | 233080-4605 |
| 10 x 300 | 233080-10030 |
| 21.2 x 300 | 233080-21230 |

### Zenix-C SEC-100 (3 µm, 100 Å)

| ID x Length (mm) | P/N |
|---|---|
| 7.8 x 300 | 233100-7830 |
| 7.8 x 50 (Guard) | 233100-7805 |
| 4.6 x 300 | 233100-4630 |
| 4.6 x 50 (Guard) | 233100-4605 |

### Zenix-C SEC-150 (3 µm, 150 Å)

| ID x Length (mm) | P/N |
|---|---|
| 7.8 x 300 | 233150-7830 |
| 7.8 x 50 (Guard) | 233150-7805 |
| 4.6 x 300 | 233150-4630 |
| 4.6 x 50 (Guard) | 233150-4605 |
| 10 x 300 | 233150-10030 |
| 21.2 x 300 | 233150-21230 |

### Zenix-C SEC-300 (3 µm, 300 Å)

| ID x Length (mm) | P/N |
|---|---|
| 7.8 x 300 | 233300-7830 |
| 7.8 x 50 (Guard) | 233300-7805 |
| 4.6 x 300 | 233300-4630 |
| 4.6 x 50 (Guard) | 233300-4605 |
| 10 x 300 | 233300-10030 |
| 21.2 x 300 | 233300-21230 |

## How to Order

Please contact Sepax Sales Department:
Phone: (302)366-1101  1-877-SEPAX-US
Fax: (302)366-1151
Email: sales@sepax-tech.com

5 Innovation Way, Suite 100
Delaware Technology Park
Newark, Delaware 19711, USA

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