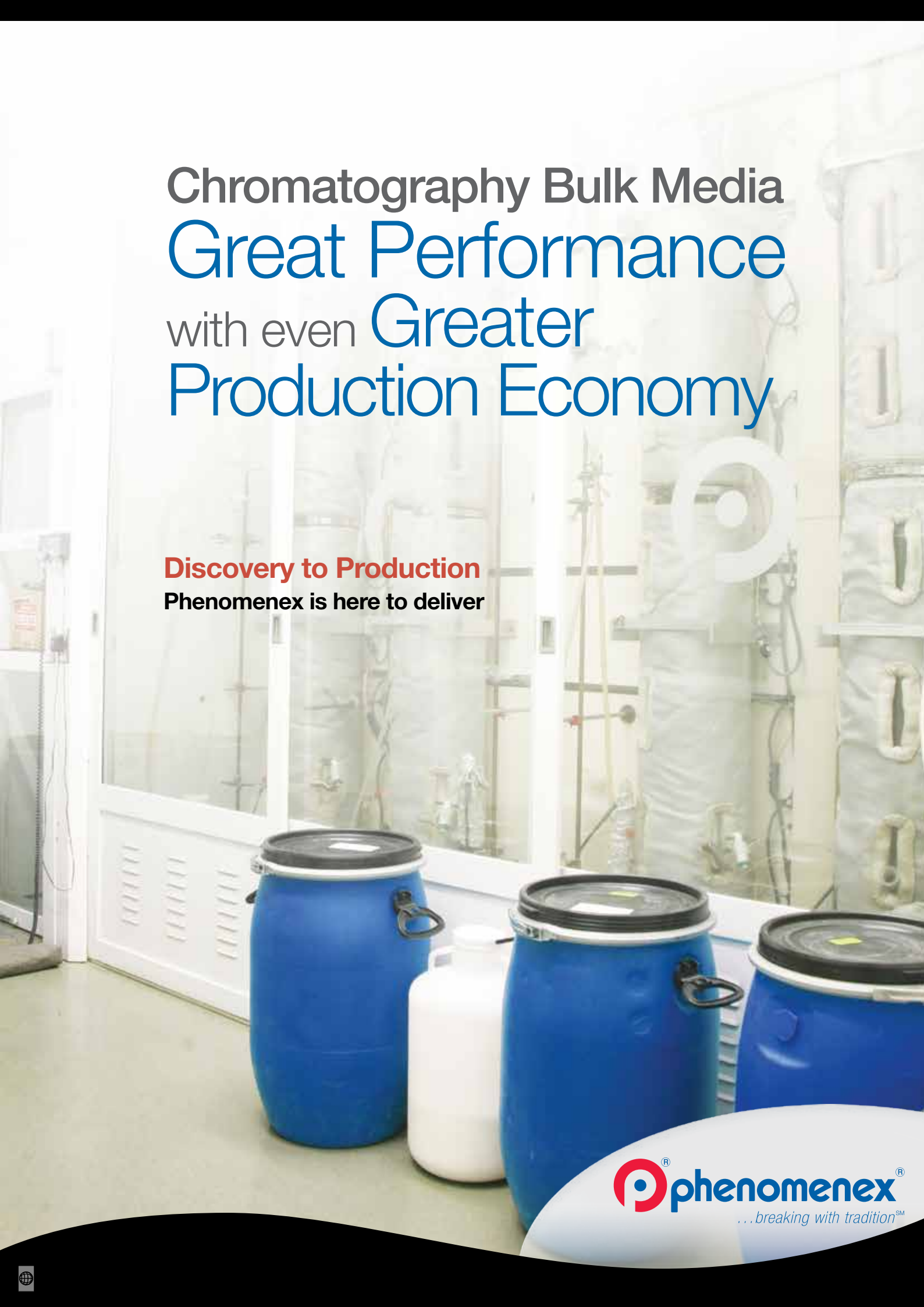
Chromatography Bulk Media

Great Performance with even Greater Production Economy

Discovery to Production

Phenomenex is here to deliver



phenomenex®

. . . breaking with tradition℠

Expect More From Your Purification Media Partner

We know there's not just one characteristic that makes our products the purification media of choice. Chromatography media is complex and multidimensional, therefore, we scrutinize each batch of our prep / process chromatography packings to deliver maximum results with less downtime.

Wide Range of
Unique Selectivities and Services

The separation characteristics of each Phenomenex media offer unique selectivity for each type of application and significant production gains for maximum loadability and process economy.

Achieve identical performance from analytical development to large process scale. Our media is available in a wide range of particle sizes and designed for the exacting standards of process, pilot, and commercial scale-up.

Services

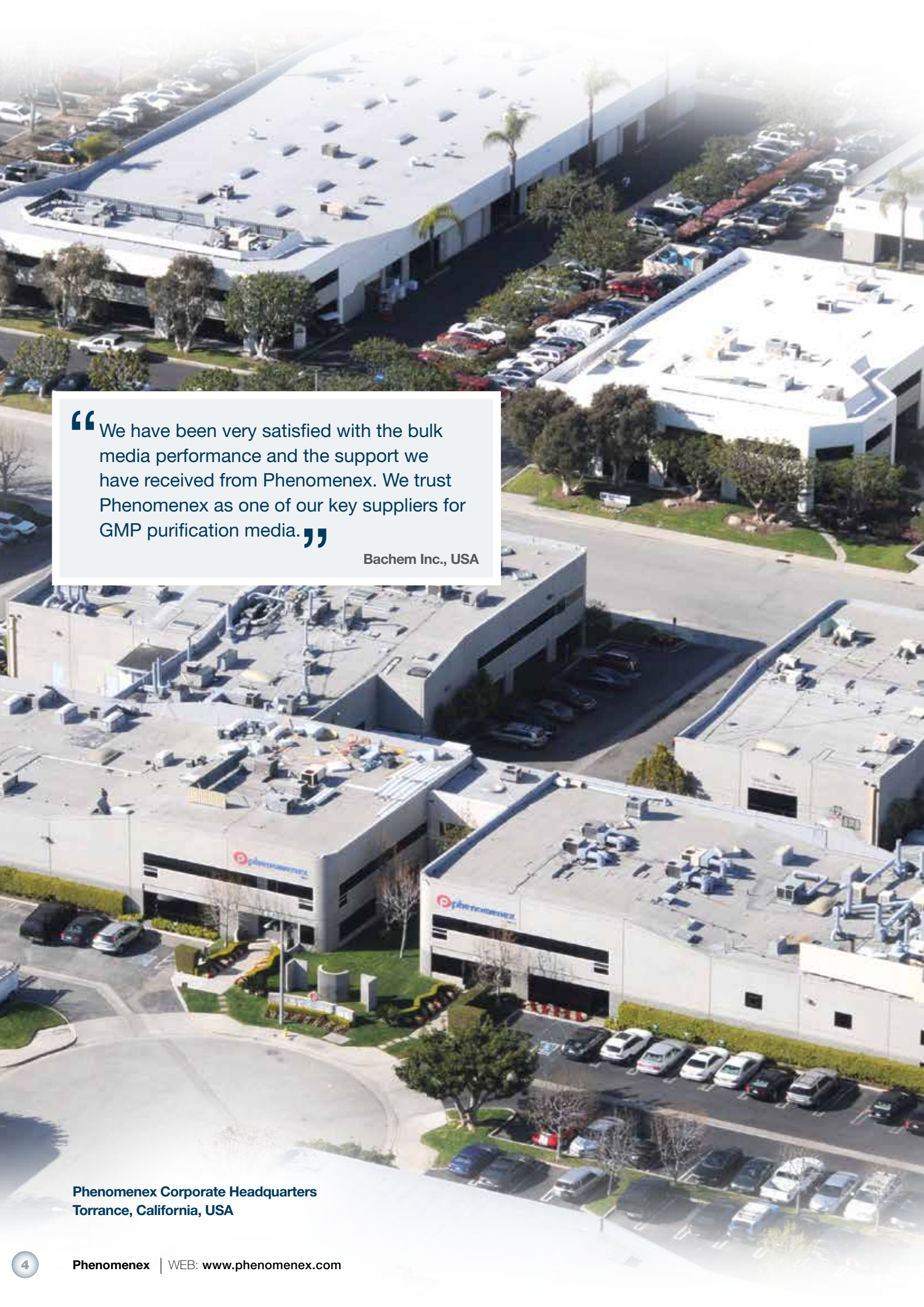
		Information
phenoLogix™ Your Method. Our Scientists.	Screening, Method Optimization, Scale-up and More	6-7

Bulk Media

		Small Molecules	Peptides	Proteins	Chiral Molecules	Oligonucleotides	Capture and Concentrate	Information	Ordering
LUNA®	Proven Performance	✓	✓					8-12	34
Jupiter®	Increased Loadability for Biomolecule Separations		✓	✓				13-17	34
synergi™	Unique Reversed Phase Chemistries for Complex Mixtures	✓						18-20	34
Gemini® pH-LC™	High pH Process Separations	✓	✓					21-23	34
LUX® Polysaccharide Chiral Columns Dependable. Scalable. Affordable.	Polysaccharide Supports with Excellent Enantioselectivity				✓			24-27	34
CLARITY® BIOSOLUTIONS	Purification of Synthetic Oligonucleotides					✓		28	34
Sepra™	Premium Low/ Medium Pressure Purifications						✓	29	29

* For detailed phase information, review the media comparison guide on pages 32-33.

Interested in evaluating a new selectivity?
See page 34 for details on our scout columns



> “We have been very satisfied with the bulk media performance and the support we have received from Phenomenex. We trust Phenomenex as one of our key suppliers for GMP purification media.”
>
> **Bachem Inc., USA**

Phenomenex Corporate Headquarters
Torrance, California, USA

Increase Yield, Purity, and Column Lifetime

We have redefined the standard for industrial process media and control all areas of media production.

We Specialize in Media with:

- High surface area for increased loadability
- Wide range of media for superior selectivities
- Superior mechanical strength for long column lifetimes
- Enhanced chemical stability for added versatility

We GUARANTEE Media with:

- Controlled pore size diameter and volume
- Narrow particle size distribution
- Reproducible bonding
- Exacting scalability
- Optimized packing density
- Metal-free silica

Phenomenex's quality management system is ISO 9001:2008 certified. This certification validates that all our processes are fully established, functional, and meet international standards.

Picture Courtesy of NovaSep

phenoLogix℠
Your Method. Our Scientists.

A New Era of Technical Support Services, Let Us Do the Work for You

PhenoLogix, our in-house application support lab, saves you time and money by screening multiple scout columns and solvent strategies for new purification methods or revalidating your current methods. We work together to make you successful by minimizing your process purification development time and optimizing your purification method.

1 Chiral Screening

- **Normal Phase**
- **Reversed Phase**
- **Polar Organic**
- **SFC**

2 Method Optimization Services

- **Fast Turnaround**
- **Easy Method Transfer**
- **Continued Support**

3 Preparative and Process Scale-Up

- **Media Screening**
- **Small Scale Purification**
- **DAC Packing Assistance**

JEFF LAYNE, PH.D.
TECHNICAL MANAGER, PHENOLOGIX

PhenoLogix
Your Method, Our Scientists

Quality Products, Advanced Performance, Complete Support

For more information or to begin a project today, please contact your local Phenomenex representative or email us at **phenologix@phenomenex.com**

You can also visit us online:
www.phenomenex.com/phenologix

"Our scientists at American Peptide have taken advantage of Phenomenex's column packing services, application development, and project-specific consultation services for some of our most challenging separations."

American Peptide Company, USA

Proven Performance

Luna high surface area (100 Å; 400 m^2/g) silica packing materials provide optimized parameters specifically designed for the purification of small molecules and peptides. This media allows high loading with excellent lifetimes.

Optimized loading parameters include:

- High-surface area for increased loading
- Silica smoothness for stable packed beds
- Optimum pore size/distribution provide outstanding performance
- High pore volume offers increased surface area
- Fine tuned bonding density for excellent reproducibility

Usually, these characteristics would result in a weak silica particle, however, the advanced silica technology behind Luna media yields a particle that is extremely uniform in its sphericity, surface smoothness, and overall physical structure.

> "We use the Phenomenex Luna HPLC as our standard purification media to purify our customer's peptides. In addition to the excellent loadability and selectivity of the media itself, the Phenomenex PREP Team supports their entire line of products very effectively."
>
> **Major Biotech Manufacturer, USA**

Did you know we offer FREE compound screening and purification services?

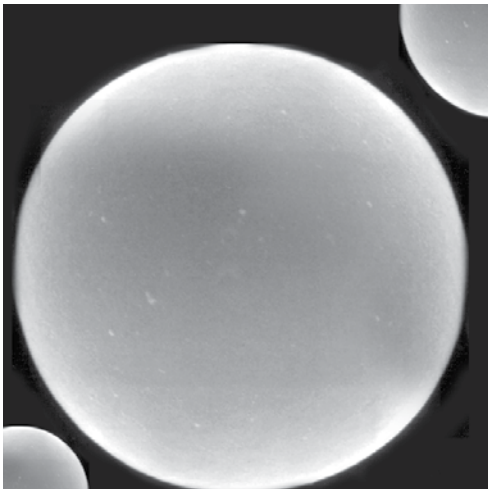
Learn more about PhenoLogix on page 6

Outstanding Lifetime

To achieve maximum purification economy, each batch of Luna media begins with a uniform starting point, the base silica itself.

Luna silica advantages:

- Very smooth and spherical particles
- Extremely stable bed packing
- Low particle shearing and breakage during packing
- Reproducible performance
- Exceptionally long column lifetimes



Extensive Quality Testing for Increased Loading and Reproducibility

We carefully control porosimetry (diameter and volume) for maximum column performance and loading capacity. We test all our media by nitrogen adsorption to ensure consistent quality results and guarantee that pore size distribution falls within tightly controlled limits.

With Luna, expect increased:

- Mass transfer
- Available surface area
- Reproducibility

> "We are using chromatography media from Phenomenex for GPL/GMP purposes, therefore we audited Phenomenex USA as a manufacturer. From the beginning, we were impressed with Phenomenex and the attitude of their employees. Phenomenex is a unique company in many aspects. Their degree of dedication to customer service, to the organization of the QMS system and last but not least the positive atmosphere in the company is impressive. The outcome of the audit was to our fullest satisfaction."
>
> **Major Generic Pharma Company, Europe**

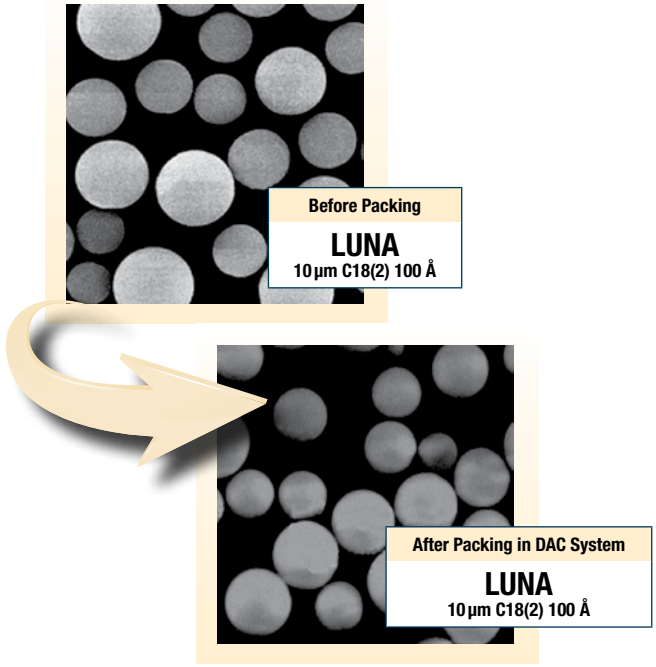
Available for Multiple Campaigns

Luna Preparative HPLC packings provide a better balance of both higher loadability and better mechanical stability than other high surface area media.

Luna media offers:

- Multiple axial compression packings without shearing or breaking
- Longer column lifetimes
- Less frequent repacking

SEM of Bulk Silica
100 Å - Packing Pressure: 140 Bar



Leader in Economics

The extremely low particle densities of Luna media require less material to pack a given volume, while maintaining high mass loading, resolution, and purity.

This can have an enormous impact on long-term operating costs of production or process methods.

Phenomenex Luna vs. Eka Chemicals Kromasil® Bulk HPLC Media

15 % less Luna media than a competitive media offering significant cost savings.*

* The packing density of each media was determined by packing 100 g into a 50 mm ID DAC column and measuring the resulting bed height. The packing density was calculated as the ratio of sorbent weight over packed bed volume. Calculated amount of media (g) required for packing a column with the dimensions L x ID (mm) by axial compression: (ID/20)2 x (3.14)(L/10)(packing density)

Dependable Chemical Stability

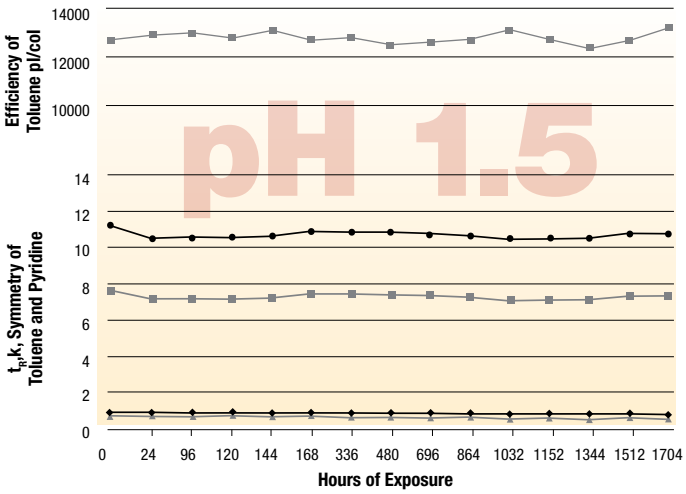
Luna features an extended pH range of 1.5 to 10.0* for most of its phases due partly by the density of the bonded phase. Luna C18(2) columns are exhaustively bonded for great peak shape independent of pH, indicating free silanols are well shielded from analyte compounds.

Chemical stability at pH levels outside the normal constraints of 2-7 is a critical factor in today's process environments, allowing:

- Greater loading capacity
- Optimization of sample solubility
- pH adjustment to optimize recovery of active pharmaceutical ingredients (API's)
- Column regeneration
- Wide range of buffer options

High Chemical Stability from pH: 1.5 to 10.0* for over 10000 hours

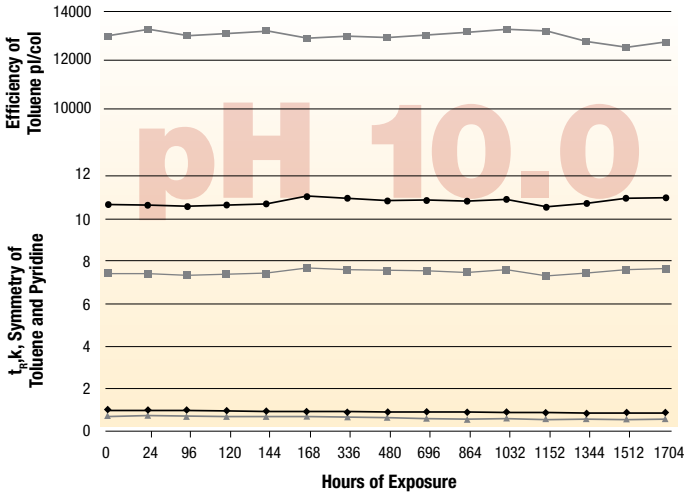
Excellent Performance at Low pH
Luna 5µm C18(2) 100 Å



Test Conditions: Column stability tested under highly acidic conditions. Continuous flush in 0.1 % TFA (pH 1.5) in Water/Acetonitrile, 50:50.

KEY:
Efficiency, Plates for Toluene — t_R of Toluene (min) — k of Toluene
Symmetry of Toluene — Symmetry of Pyridine

Extended Media Lifetime Even Under Caustic Washes
Luna 5µm C18(2) 100 Å



Test Conditions: Column stability tested under highly basic conditions. Continuous flush in 20 mM Na_2HPO_4 (pH 10.0) in Water/Acetonitrile, 50:50.

KEY:
Efficiency, Plates for Toluene — t_R of Toluene (min) — k of Toluene
Symmetry of Toluene — Symmetry of Pyridine

> "The bulk media products and product support services provided by Phenomenex are of consistently high quality. We use Phenomenex media in the cGMP manufacture of complex peptides for our customers."
>
> **Almac, United Kingdom**

* pH range under isocratic conditions. pH range is 1.5-9.0 under gradient conditions.

Consistent Selectivity
Across All Particle Sizes

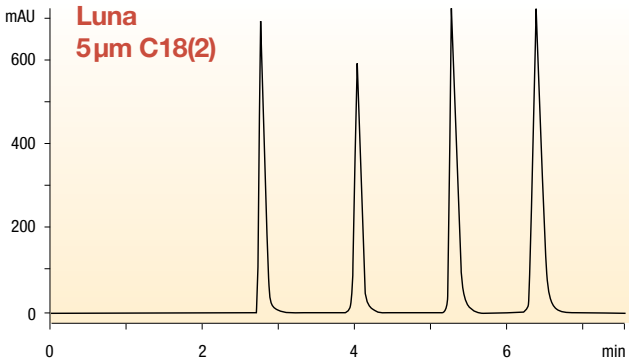
Luna offers a complete range of selectivities on 3 µm, 5 µm, 10 µm and 15 µm particle sizes. Each phase features identical technology and base silica across all particle sizes, making scale up from analytical through prep conditions quick and simple.

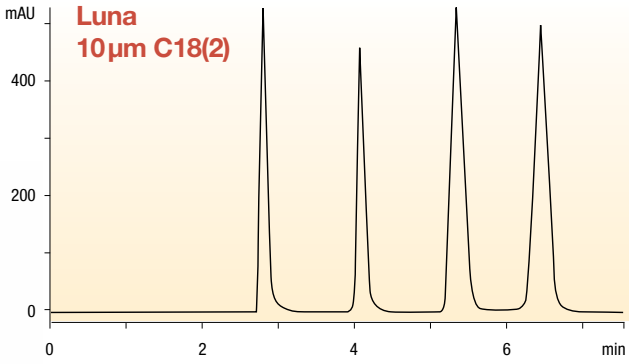
Which Luna media should you choose?

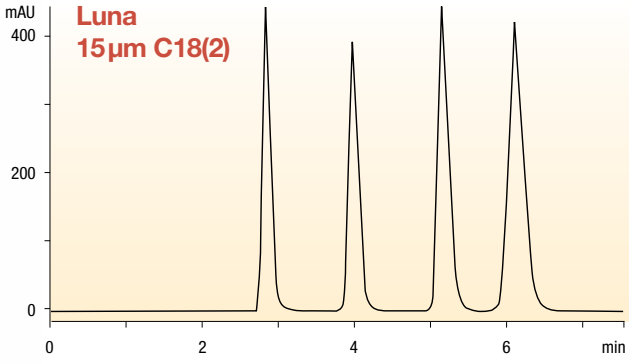
Luna 10 µm-*PREP* offers excellent economy and great performance with narrow particle size distribution, suitable for most applications. Luna 10 µm is available when higher preparative performance is needed for difficult separations and offers extremely narrow particle size distribution producing higher efficiencies with increased yield.

Need additional media selection assistance?

Contact your local Phenomenex bulk media representative.



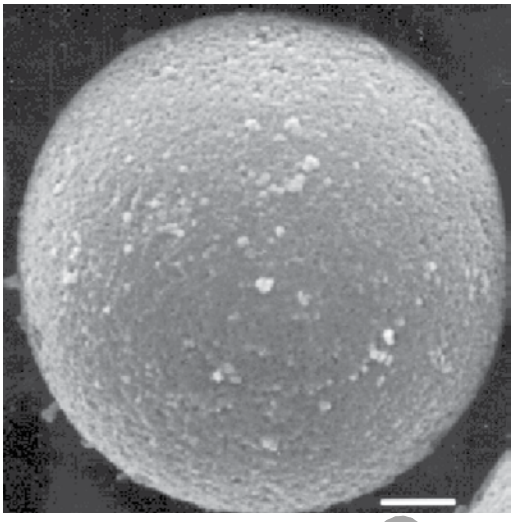




Increased Loadability for Biomolecule Separations

Jupiter 300 features ultra-pure metal-free silica with 300 Å pores, making it suitable for purifying target proteins and large peptide therapeutics. Its dense, bonded phase coverage decreases non-specific interactions, leading to easier quantitation and improved resolution and separation of complex mixtures. This produces higher yields, fewer purification runs, and better overall economy.

- High mechanical-strength silica for better packing and longer lifetime
- Large loading capacity for higher sample recovery
- 1.5 to 10 pH stability for easy column cleaning and regeneration
- Low particle densities, requiring less material to pack columns

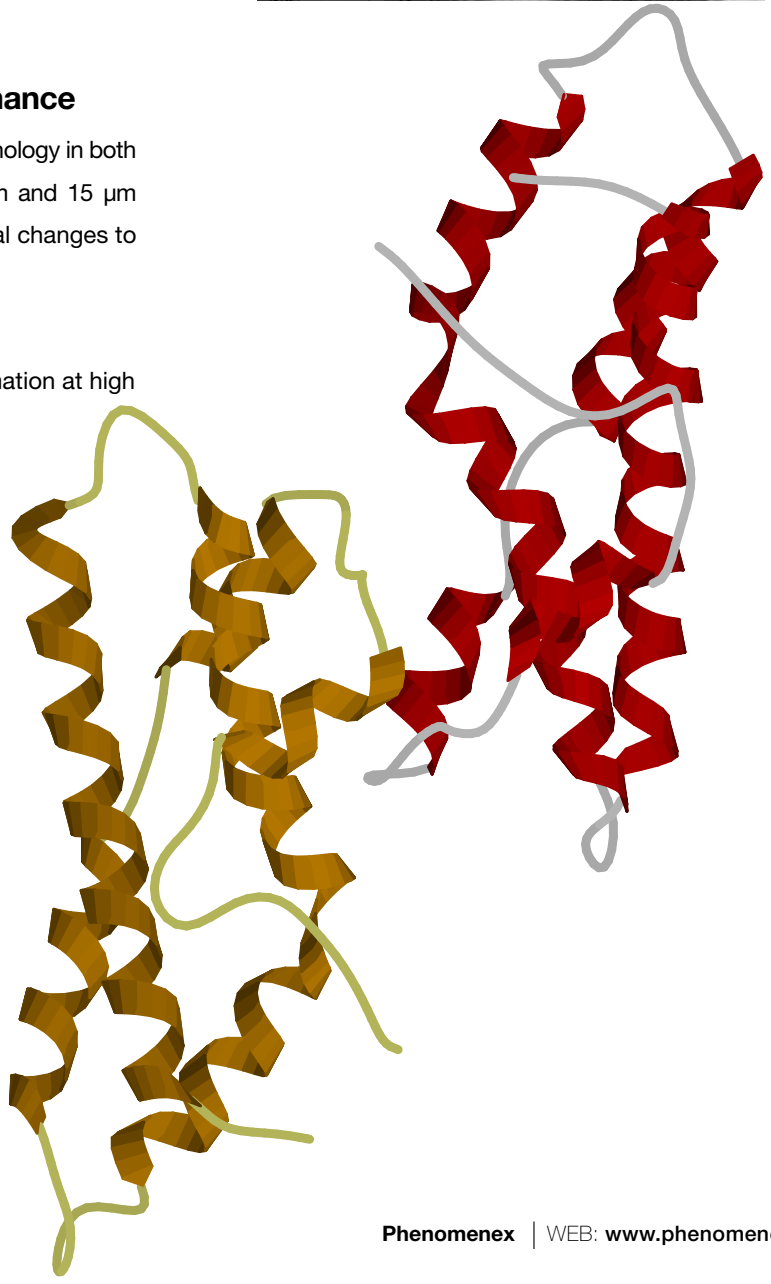


Easy Scale-Up for Exacting Performance

Jupiter uses identical bonding and base silica technology in both analytical and preparative materials. 5 µm, 10 µm and 15 µm Jupiter 300 Å media easily scales up with minimal changes to the separation.

All Jupiter particle sizes offer:

- Resistance to silica shearing and fine formation at high packing pressures and flow rates
- Easy material cleaning and regeneration



High Mechanical Strength
Longer Column Lifetimes

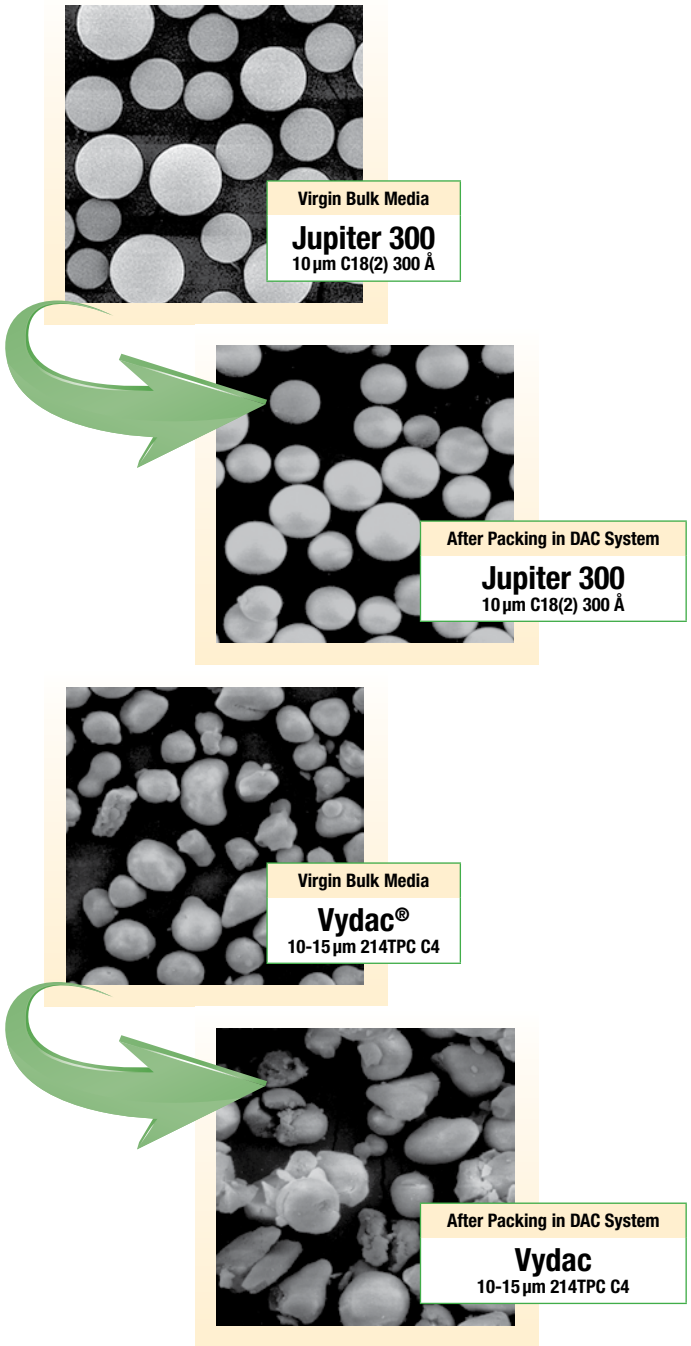
After packing in a Dynamic Axial Compression (DAC) column, Jupiter silica maintains its smooth uniform structure, while other silicas show fines of crushed silica particles. This allows Jupiter to maintain excellent performance for longer periods.

Jupiter bulk media offers:

- More stable column bed
- Lower backpressure
- Reduced fouling

After close examination of the unpacked material by scanning electron microscopy, the strength of Jupiter 300 silica is clear. Jupiter particles remain structurally unchanged after the DAC packing. After DAC packing, Vydac particles turn into fines that can clog frits, dramatically increasing backpressure leading to decreased performance and shortened column / material lifetime.

High Mechanical Strength Silica Resists Sheering



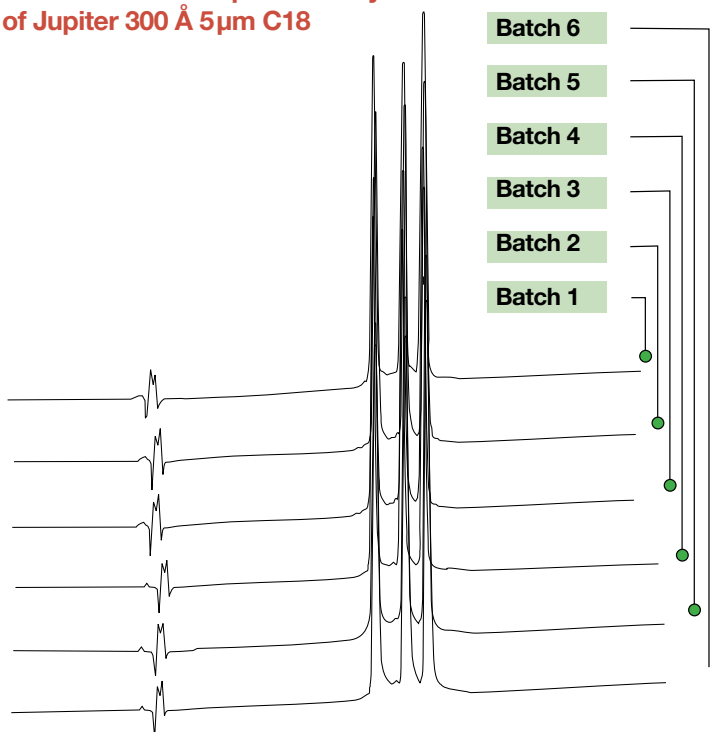
> "Jupiter 300 C4 is a silica based resin consisting of very stable particles and combines highest selectivity / resolution together with high capacity. Richter-Helm BioLogics [has] used Jupiter 300 C4 resin in three different preparative scales to date and recognized significant robustness and reproducibility regarding column packing quality, selectivity and capacity. Utilizing Jupiter 300 C4 resin in biopharmaceutical drug manufacturing enables a straight forward purification schedule saving facility time."
>
> **Richter-Helm BioLogics**
> **Dengelsberg, Germany**

Engineered for Reproducibility and Quality

Jupiter silica particle consistency, size, and smoothness is tightly controlled for quality and reproducibility.

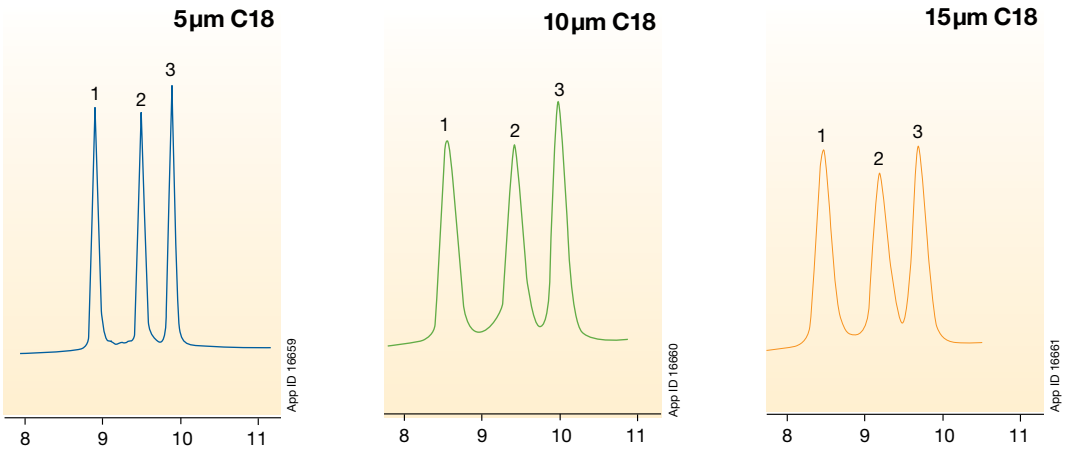
- Over 25 individual quality control tests performed on every batch of Jupiter material
- Every aspect of media reproducibility is specified, tested, and reported in a Materials Validation Document (MVD)
- pH 1.5-10 stability gives robust, method development opportunities for increased yield.

Batch-to-Batch Reproducibility of Jupiter 300 Å 5µm C18



Column: Jupiter 5 µm C18 300 Å
Dimensions: 250 x 4.6 mm
Part No.: 00G-4053-E0
Mobile Phase: A: 0.1 % TFA in Water
B: 0.1 % TFA in Acetonitrile
Gradient: A/B (75:25) to A/B (45:55) in 15 min
Flow Rate: 1.0 mL/min
Detection: UV @ 220 nm
Sample: 1. Yeast Cytochrome *c*
2. Equine Cytochrome *c*
3. Bovine Cytochrome *c*

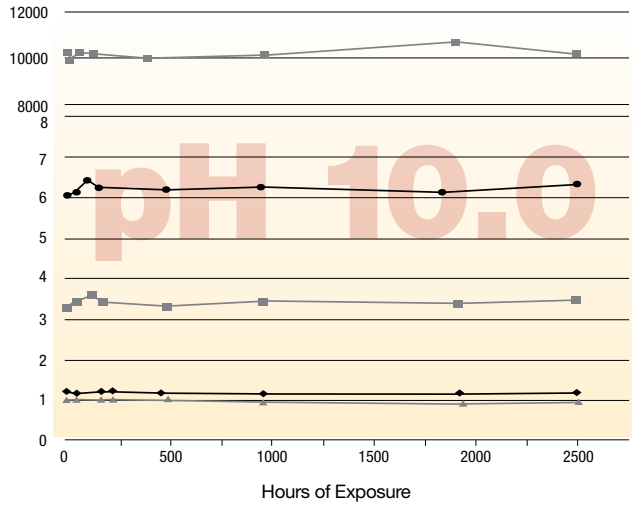
Scale-Up Quickly Between Particle Sizes



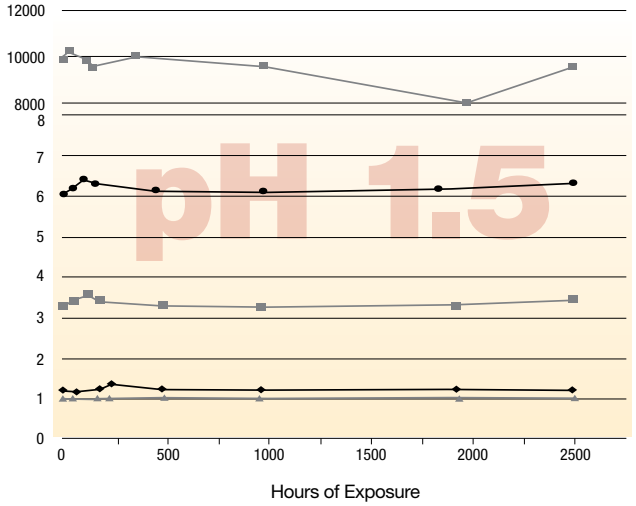
Extended Chemical Stability from pH 1.5 – 10

Jupiter 300 has been tested and is stable from pH 1.5 to 10 for over 2,500 hours. Jupiter offers increased column lifetime at extreme pH levels and method development opportunities for increased yield.

Stability of Jupiter 300 C18 at pH 1.5 and 1.0



Test Conditions: Column flushed in 20 mM Na_2HPO_4 (pH 10.0) in Water/Acetonitrile (50:50)

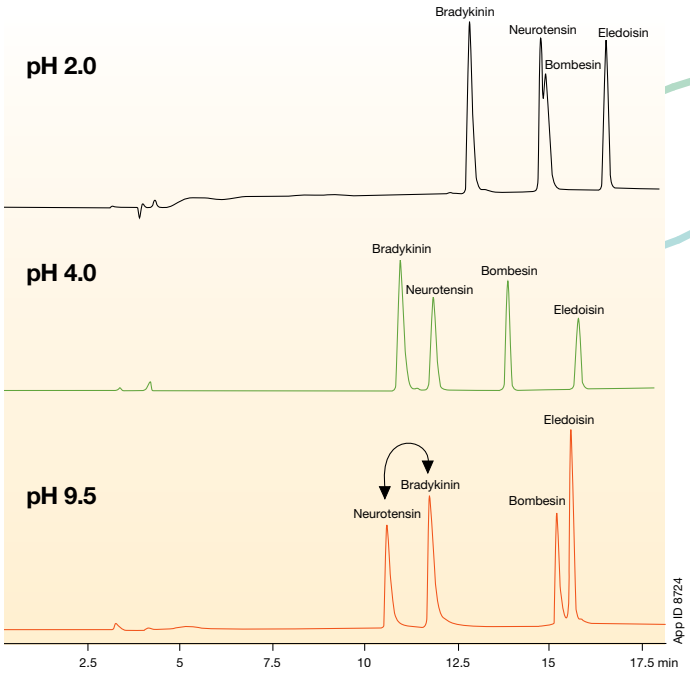


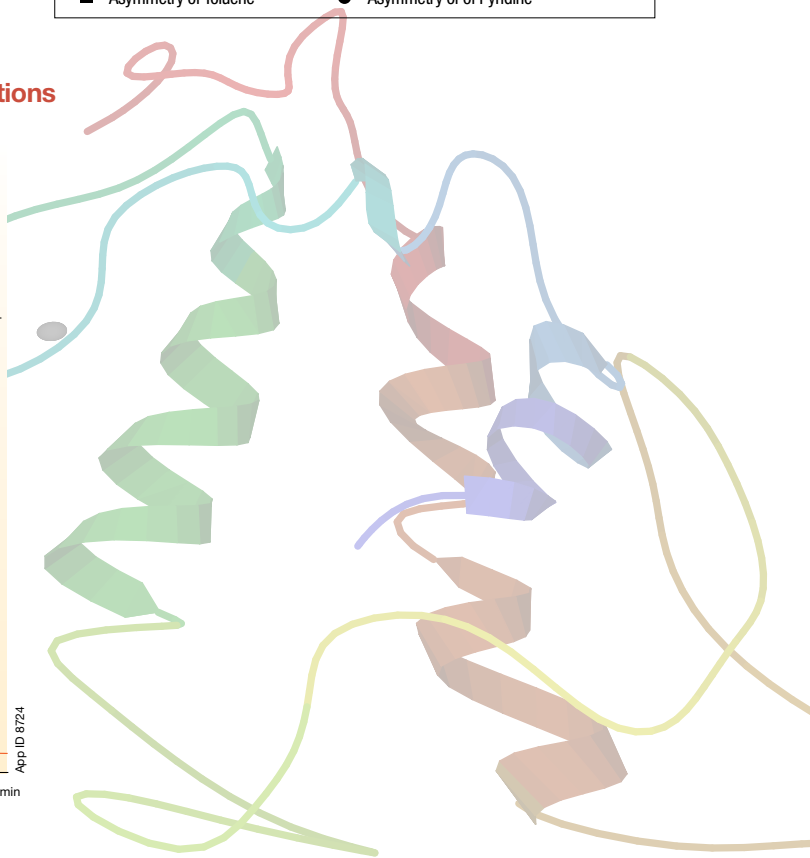
Test Conditions: Column flushed in 0.1 % TFA (pH 1.5) in Water/Acetonitrile (50:50)

KEY:
- ◆ Efficiency, Plates for Toluene
- ▲ t_R of Toluene (min)
- ◆ k of Toluene
- ■ Asymmetry of Toluene
- ● Asymmetry of of Pyridine

KEY:
- ◆ Efficiency, Plates for Toluene
- ▲ t_R of Toluene (min)
- ◆ k of Toluene
- ■ Asymmetry of Toluene
- ● Asymmetry of of Pyridine

Utilize pH for Method Development of Protein Separations





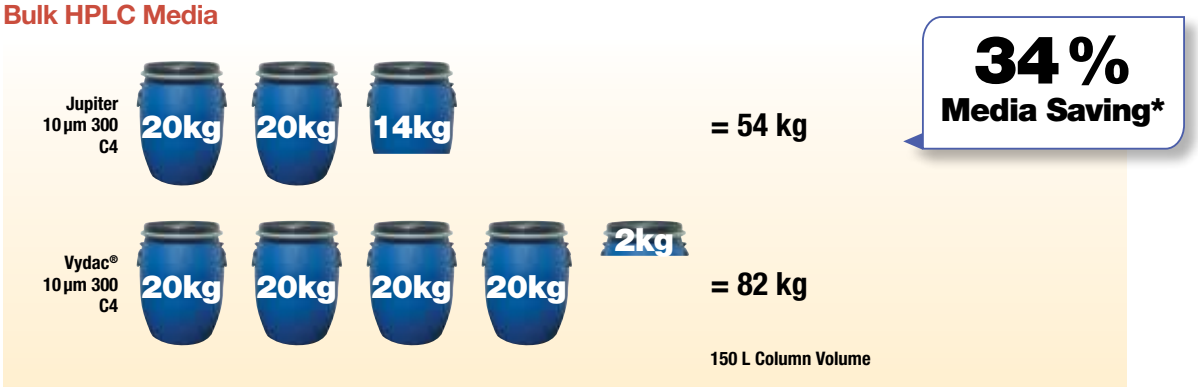
Less Material Required

Jupiter 300 media have low particle densities, requiring less material to pack a given column volume. While less media is needed to pack a given dimension compared to other common prep sorbents, mass loading remains high with peak resolution and purity maintained.

Enormous Impact on Long-term Operating Costs

Example: Packing a 150 L column volume would require up to 34 % less Jupiter 300 Å media than a competitive media offering significant cost savings.*

Phenomenex Jupiter 300 vs. Alltech Vydac® Bulk HPLC Media



Have you heard of PhenoLogix's FREE protein and peptide screening services?

- Method Development and Optimization
- Method Re-Validation
- Small Scale Purification

Learn more on page: 6

* The packing density of each media was determined by packing 100 g into a 50 mm ID DAC column and measuring the resulting bed height. The packing density was calculated as the ratio of sorbent weight over packed bed volume. Calculated amount of media (g) required for packing a column with the dimensions L x ID (mm) by axial compression: (ID/20)2 x (3.14)(L/10)(packing density)

Unique Reversed Phase Chemistries for Complex Mixtures

synergi™

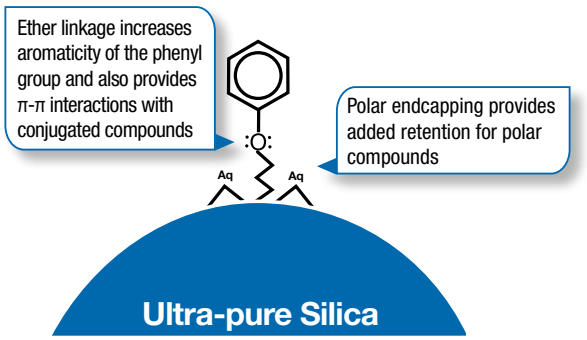
Successfully separate complex mixtures of highly polar and/or non-polar compounds and challenging analytes with the unique selectivity range of Synergi high surface area purification media, significantly increasing purification yield.

Synergi is available in four unique phases, each offering dramatic differences in:

- Selectivity
- Retention time
- Resolution

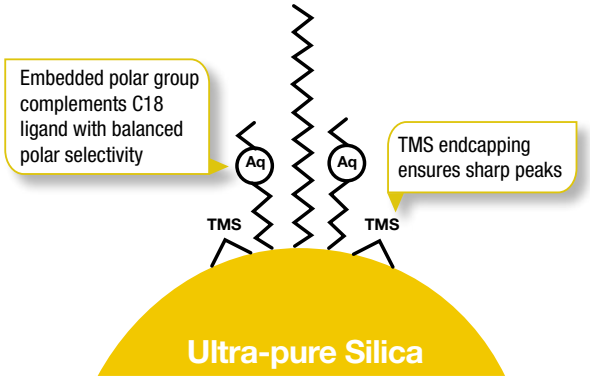
Synergi Polar-RP
Phenyl Ether-Linked

For polar and aromatic mixtures



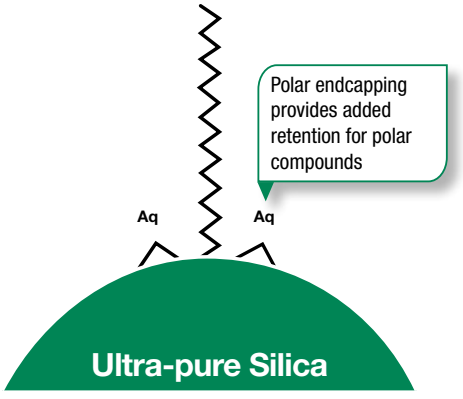
Synergi Fusion-RP
C18 Polar Embedded

Balanced non-polar and polar performance



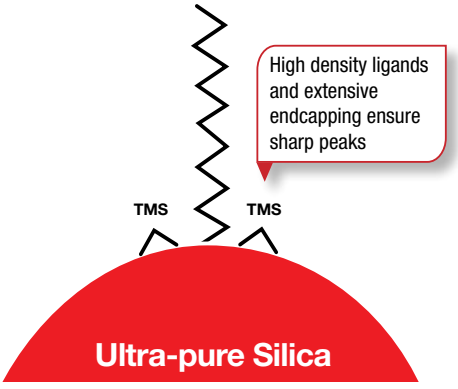
Synergi Hydro-RP
C18 Polar Endcapped

Strong non-polar and polar retention



Synergi Max-RP
C12 TMS Endcapped

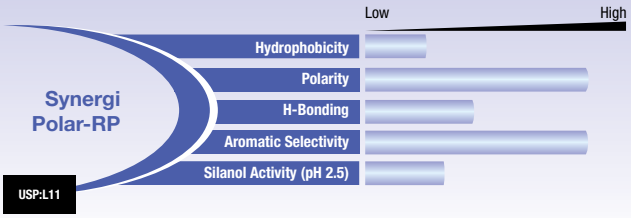
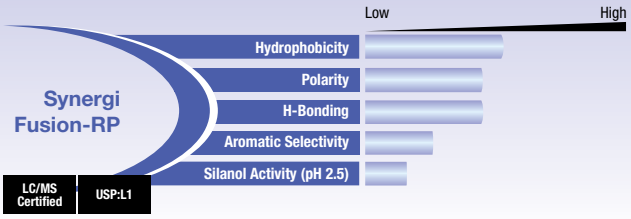
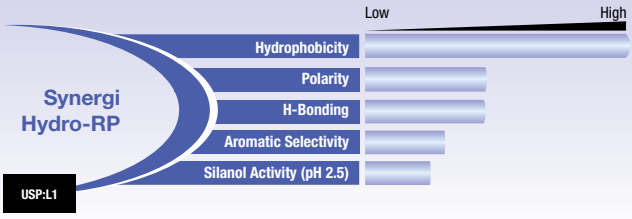
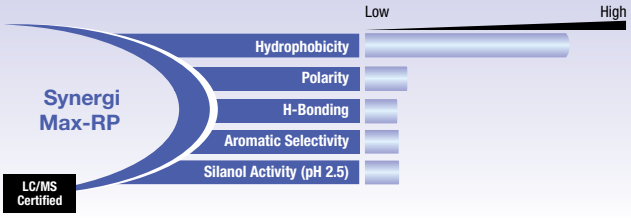
Excellent for basic compounds at neutral pH



Increased Loading with Unique Selectivities

Each Synergi phase has a unique selectivity profile composed of multiple characteristics. These differences offer a complementary selectivity to the standard C18, C8, or silica phases traditionally employed in larger scale HPLC.

Phases

Description	Selectivity Profile
Synergi Polar-RP **(100 % Aqueous Stable)** This ether linked phenyl column is polar endcapped and offers high cation retention capabilities to improve retention for ionized bases.	
Synergi Fusion-RP **(100 % Aqueous Stable)** A low ligand density polar embedded C18, this unique phase contributes to hydrogen bonding and donating. It provides balanced selectivity for acids and bases.	
Synergi Hydro-RP **(100 % Aqueous Stable)** Polar endcapped C18 column that provides very high hydrophobic interactions and hydrogen donating capabilities make this column ideal for retaining polar bases.	
Synergi Max-RP Densely bonded C12 contributes a lot of hydrophobic retention and steric based selectivity. Combined characteristics of the base silica and the bonded phase will also provide hydrogen bonding benefits.	

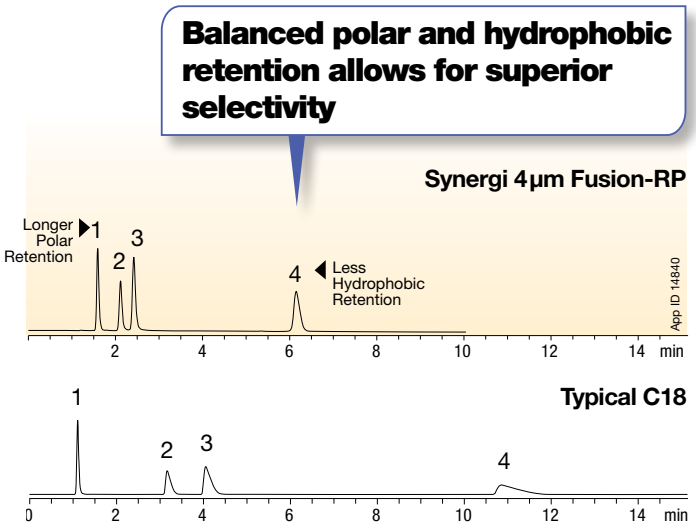
> "We regularly use RP stationary phases from Phenomenex for our separation problems. Especially Synergi Polar-RP was found to often show the desired selectivity, distinguishing this phase from other RP phases."
>
> **CARBOGEN AMCIS, Switzerland**

Selectivity
Like No Other

Offering a balanced combination of hydrophobic and polar selectivity, Synergi Fusion-RP separates compounds exhibiting moderately polar and hydrophobic characteristics.

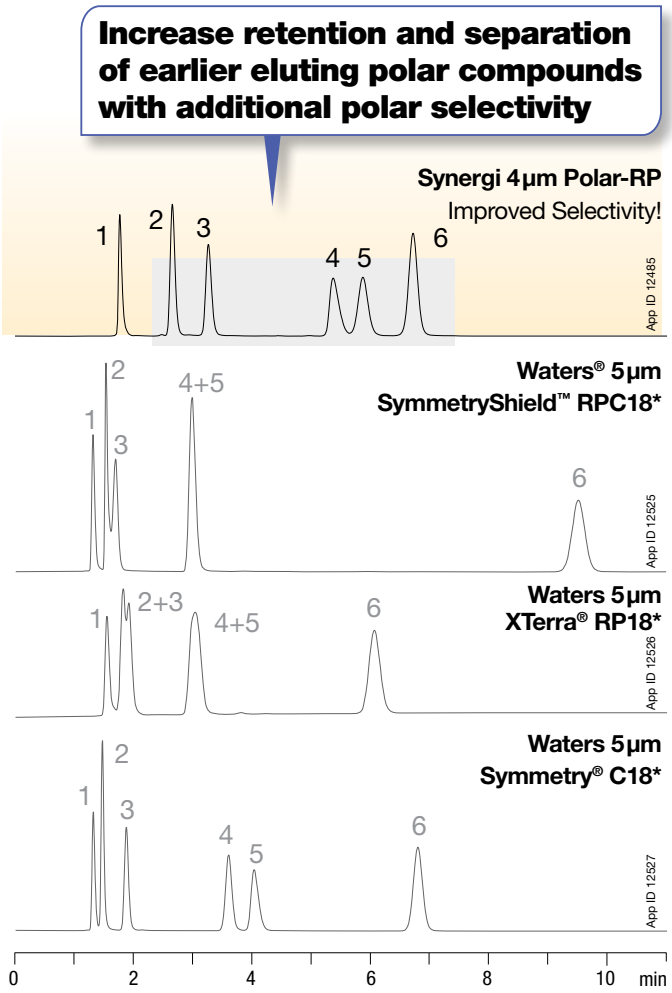
The slightest variations in compound polarity and aromaticity are exploited by Synergi Polar-RP to achieve the greatest separation between polar and/or aromatic compounds.

Hydrophobic Basic Compounds



Columns: Synergi 4µm Fusion-RP
Typical C18
Dimensions: 150 x 4.6 mm
Mobile Phase: 20 mm Potassium Phosphate, pH 2.5 / Acetonitrile (75:25)
Flow Rate: 1.0 mL/ min
Detection: UV @ 210 nm
Sample: 1. Maleic acid
2. Chlorpheniramine
3. Triprolidine
4. Diphenhydramine

Increased resolution of polar compounds with Synergi Polar-RP compared to traditional C18 phases



Columns: Synergi 4µm Polar-RP
Waters 5µm SymmetryShield RPC18
Waters 5µm Symmetry C18
Waters 5µm XTerra RP18
Dimensions: 150 x 4.6 mm
Mobile Phase: 20 mM Potassium phosphate pH 3 / Methanol (50:50)
Flow Rate: 1.0 mL/ min
Detection: UV @ 230 nm
Temperature: Ambient
Injection: 2 µL
Sample:
1. Metaproterenol (0.4 µg)
2. Pindolol (0.6 µg)
3. Metoprolol (0.15 µg)
4. Alprenolol (0.3 µg)
5. Propranolol (0.04 µg)
6. Ethylparaben (0.4 µg)

*Comparative separations may not be representative of all applications.

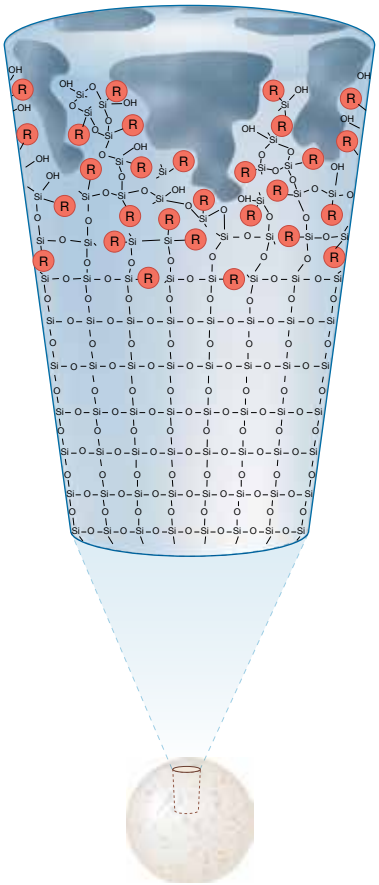
SymmetryShield is a trademark of Waters Corp. XTerra and Symmetry are registered trademarks of Waters Corp. Phenomenex has no affiliation with Waters Corp. Columns used for comparison studies were manufactured by and purchased from Waters Corp.

Did you know we offer FREE compound screening services?

Learn more about PhenoLogix on page 6

High pH
Process Separations

Gemini® pH-LC™



Gemini features a pH stability from 1-12, making it optimal for high alkaline washes and high pH purifications of basic drugs.

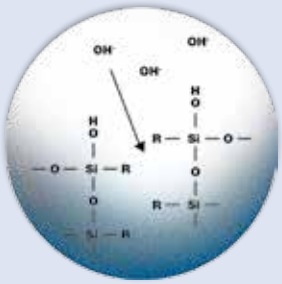
Optimized parameters include:

- Innovative surface layer for increased pH stability
- High-surface area for increased loading
- Silica smoothness for stable packing beds
- Bonding density for excellent reproducibility

TWIN™ (Two-In-One) Technology™ is what gives Gemini media its superior performance edge. During the final stage of silica manufacturing, a unique silica-organic layer is grafted to create a completely new composite particle. Since the internal base silica is unaltered by this manufacturing process the particle retains the mechanical strength and rigidity of silica. This provides excellent efficiency, while the silica-organic shell protects the particle from chemical attack.

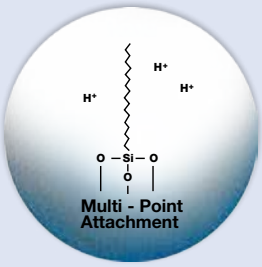
How It Works

Gemini
Organosilane Coat Resists High pH Attack

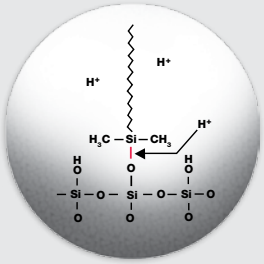


Standard Silica
Silica Dissolution

Multi-Point Ligand Attachment
Resists Low pH Ligand Cleavage



Ligand Cleavage

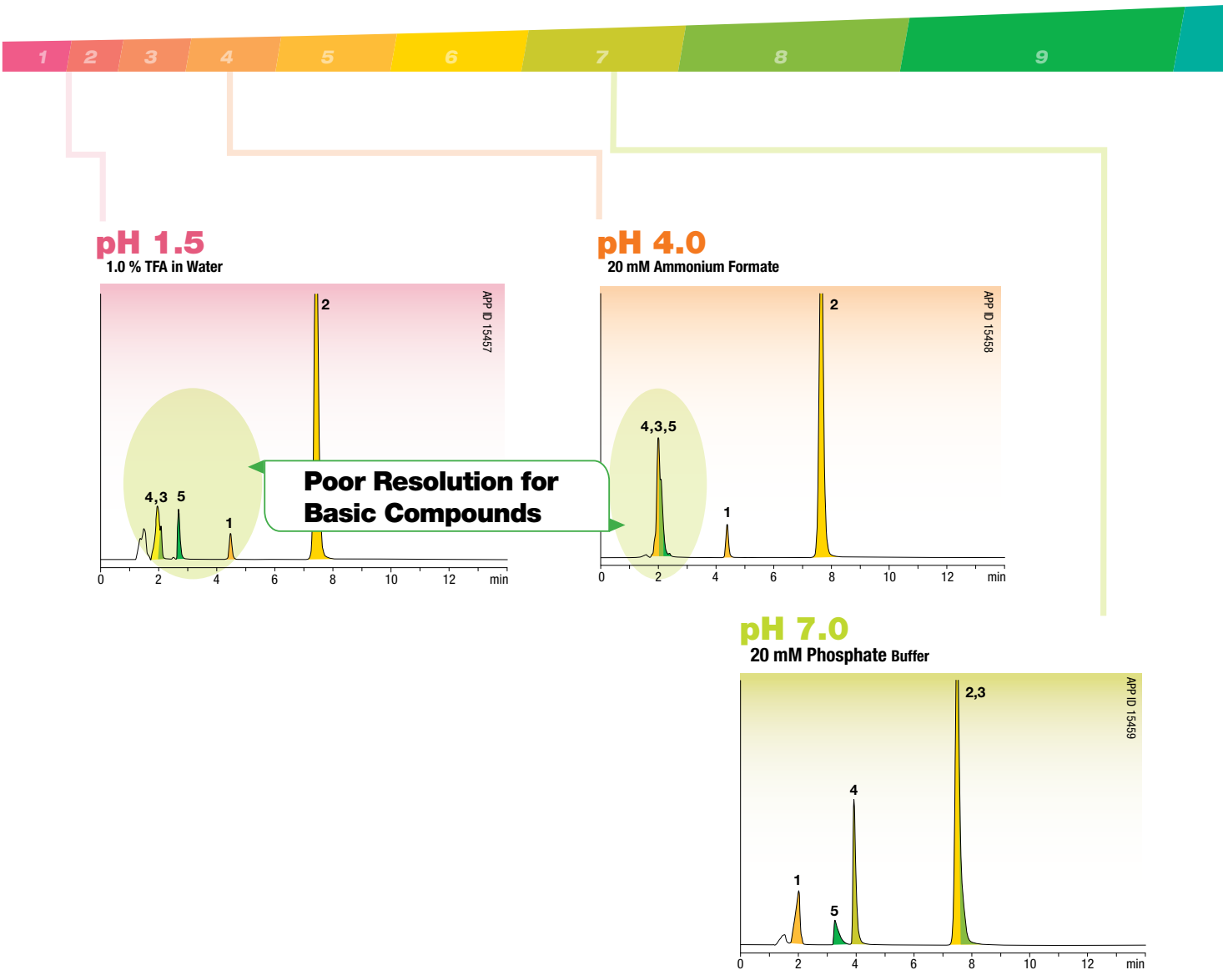


Increase Sample Load by 2-3X by Adjusting pH

Gemini® pH-LC™

The advent of pH stable (1-12) process media, such as Gemini C18, enables improved retention and resolution of basic compounds at high pH without compromising column lifetime. Modifying pH conditions can increase selectivity allowing for larger yields.

pH-LC - Extended pH 1-12 Stability for Alternate Selectivity



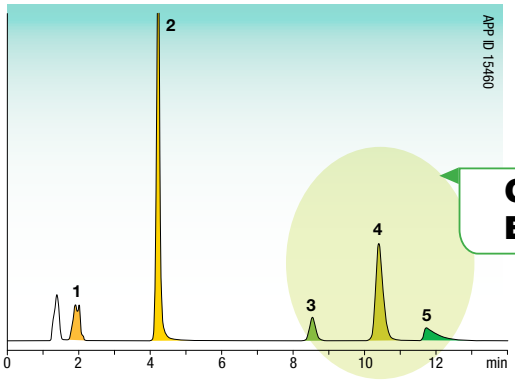
Greater Economy for High pH Process Separations

Gemini process media offers several advantages over conventional process media that are critical factors in today's process environments.

- Allows Clean-in-Place (CIP) processes by means of a caustic wash
- No leaching of bonded phase or silica matrix that can contaminate your product
- Longer overall lifetime at extended pH conditions
- Prevents chromatographic changes (retention, selectivity, peak shape, etc.)

pH 10.0

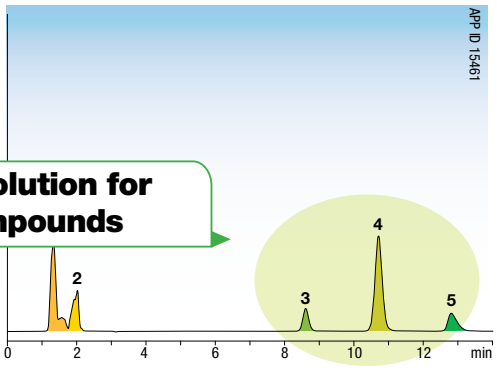
10 mM Ammonium Bicarbonate Buffer



Great resolution for Basic compounds

pH 12.0

20 mM Triethylamine Buffer



Column: Gemini 5 µm C18
Dimension: 150 x 4.6 mm
Part No.: 00F-4435-E0
Mobile Phase: Acetonitrile/Buffers at various pH's (see chromatograms), (50:50)
Flow Rate: 1.0 mL/min
Temperature: 22 °C
Detection: UV @ 254 nm
Sample: 1. Chlorpropamide (pKa 5.0)
2. Butylparaben
3. Lidocaine (pK_a 7.9)
4. Triprolidine (pK_a 6.5)
5. Dextromethorphan (pK_a 9.2)

* Compared to a traditional column with a pH 1-10 range.

Complete Chiral Solutions

Lux
Polysaccharide Chiral Columns
Dependable. Scalable. Affordable.

Achieving optimal chiral separation is easier than ever with four unique bulk Lux polysaccharide stationary phases to screen. Choose a phase, then transfer the method to process, pilot, and commercial scale.

Lux chiral columns and bulk media simplify the separation process:

- Unique and traditional phases that increase the success rate of the chiral screen
- Consistent particle size distribution so performance is maintained
- Mechanically strong media for increased stability
- Available in multiple particle sizes for direct scale up (10 µm and 20 µm bulk media for process scale purifications; 3 µm and 5 µm packed columns for screening and small scale purifications)

Resolve Your Enantiomers with Four Unique Phases*

The Lux family of bulk cellulose chiral selectors provides a variety of complementary selectivities.

Screen for the most effective chiral separation under the following conditions:

- Reversed Phase
- Polar Organic
- Normal Phase
- Supercritical Fluid Chromatography (SFC)

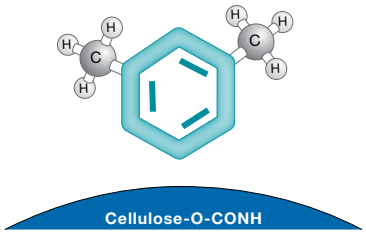
Have you heard of PhenoLogix's FREE chiral screening services

- Method Development and Optimization
- Method Re-Validation
- Small Scale Purification

Learn more on page: 6

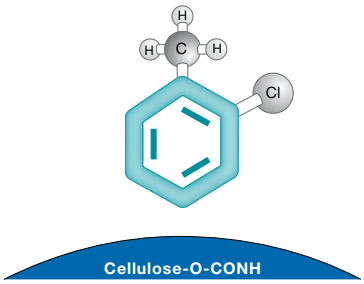
Lux Cellulose-1

Cellulose tris(3,5-dimethylphenylcarbamate)



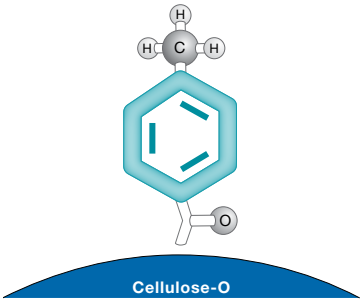
Lux Cellulose-2

Cellulose tris(3-chloro-4-methylphenylcarbamate)



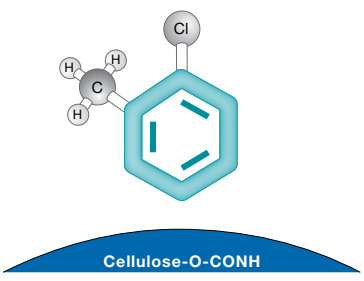
Lux Cellulose-3

Cellulose tris(4-methylbenzoate)



Lux Cellulose-4

Cellulose tris(4-chloro-3-methylphenylcarbamate)



* Based on 233 compounds screened on all Lux phases

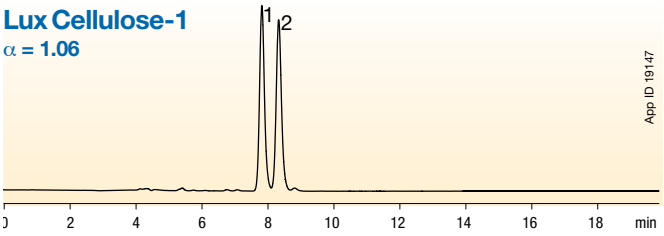
Versatile Polysaccharide Chiral Phases for HPLC, SMB, and SFC

Polysaccharide Chiral Columns
Dependable. Scalable. Affordable.

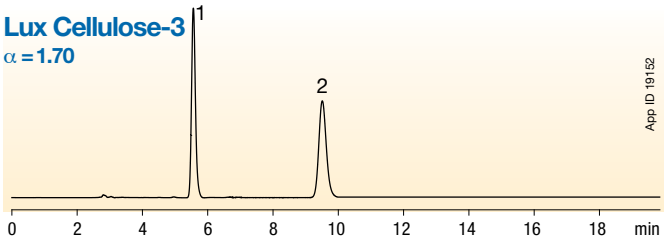
Utilizing differences in selectivity can help develop methods more efficiently by offering broad and contrasting chiral recognition abilities. Lux chiral selectors provide an opportunity for increased yield.

Etozolin

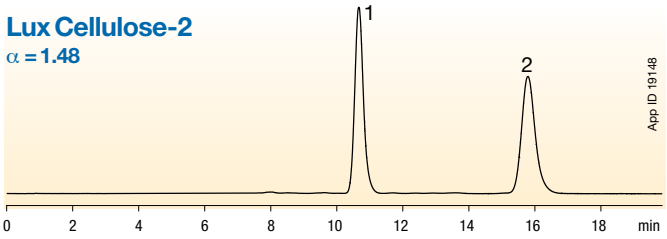
Lux Cellulose-1
α = 1.06



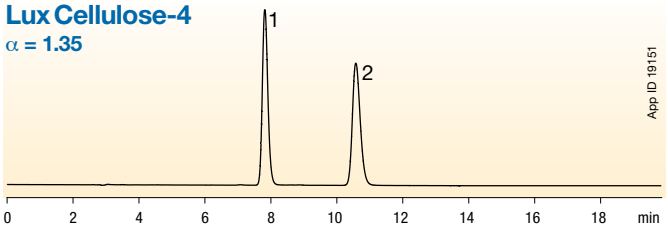
Lux Cellulose-3
α = 1.70



Lux Cellulose-2
α = 1.48

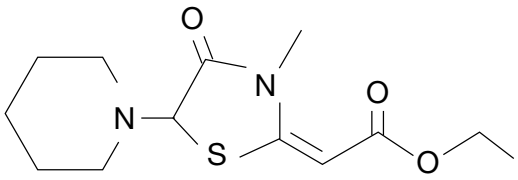


Lux Cellulose-4
α = 1.35



Conditions for all columns:

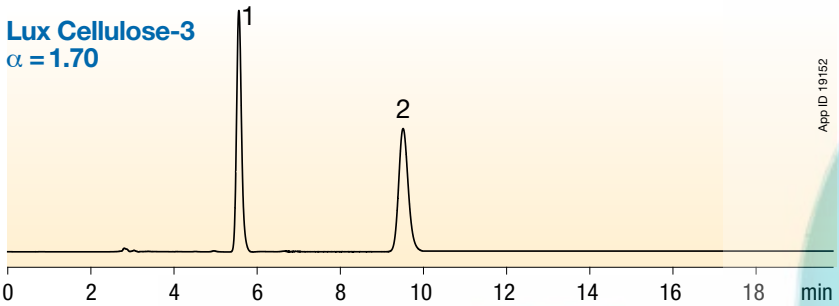
Dimensions: 250 x 4.6 mm
Mobile Phase: Acetonitrile / 0.1 % Diethylamine in 20 mM NH_4HCO_3 (60:40)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient



Optimal Resolution

Based on a four phase screen under Reversed Phase conditions, the optimal chiral stationary phase for resolving Etozolin is Lux Cellulose-3.

Lux Cellulose-3
α = 1.70



Comparative separations may not be representative of all applications.

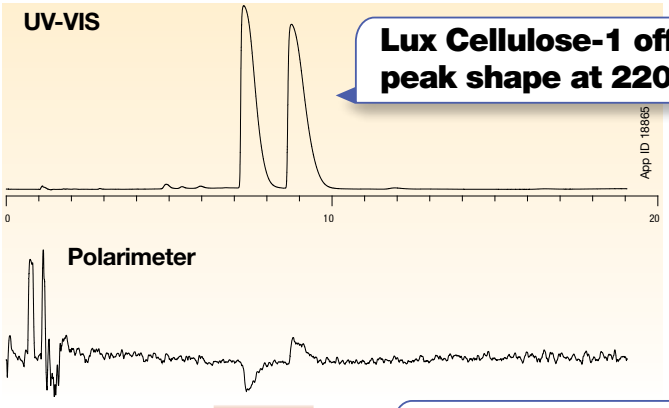
Supercritical Fluid Chromatography

Lux
Polysaccharide Chiral Columns
Dependable. Scalable. Affordable.

SFC APPROVED

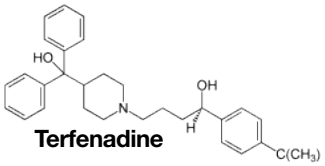
Analytical and Axia packed columns have been extensively tested on various SFC systems and all column ID's and lengths are SFC compatible.

Baseline Separation of Enantiomers



Lux Cellulose-1 offers great peak shape at 220 nm

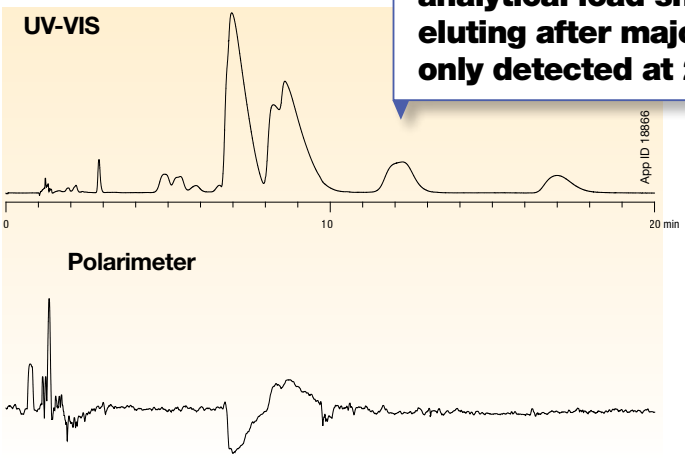
Dimensions: 250 x 4.6 mm
Flow Rate: 2.5 mL/min
Detection: UV @ 220 nm
Load: 300 µg 10 µL



Terfenadine

5x Load Increase

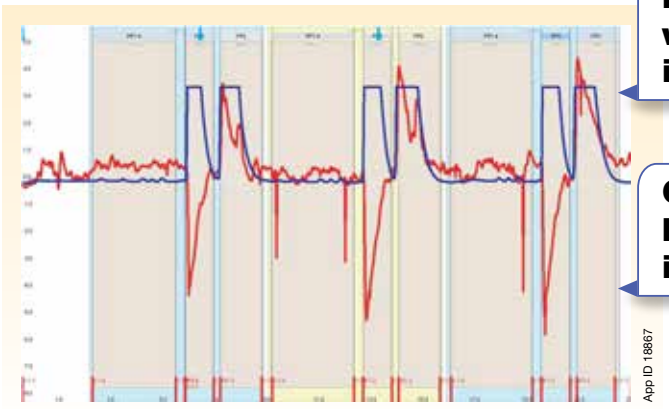
Overloading study with increased analytical load showing impurities eluting after major enantiomers only detected at 254 nm



Dimensions: 250 x 4.6 mm
Flow Rate: 2.5 mL/min
Detection: UV @ 254 nm
Load: 1.5 mg in 50 µL

Conditions for all columns:
Columns: Lux 5 µm Cellulose-1
Mobile Phase: Methanol with 0.1 % DEA/ Carbon Dioxide (25:75)
Column Temperature: 35 °C
Polarimeter: ALP-PDR-Chiral
Sample: Terfenadine with ethanol dissolution solvent

70x Load Increase



High loading capacity media along with stacking injections allow for increased yields and productivity

Closer stacked injections can not be used due to the impurities eluting after the major enantiomers

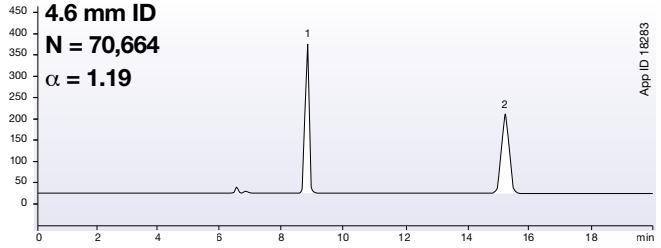
Dimensions: 250 x 21.2 mm
Flow Rate: 50 mL/min
Detection: UV @ 220 nm
Load: 105 mg in 3.5 mL

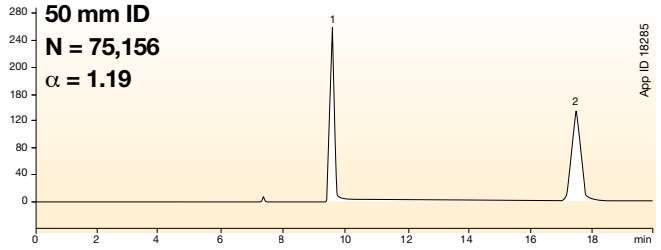
7.5 cycles per hr/ 787 mg per hr

Maintain Performance at Any Scale

LUX
Polysaccharide Chiral Columns
Dependable. Scalable. Affordable.

High Efficiency trans-Stilbene Oxide from Analytical to Preparative





Conditions for all separations except where noted:

Column: Lux 5 µm Cellulose-2
Dimensions: 1. 250 x 4.6 mm
2. 250 x 50 mm
Mobile Phase: Hexane/Isopropanol (90:10)
Flow Rates: 1. 0.5 mL/min
2. 50 mL/min
Detection: UV @ 220 nm
Temperature: Ambient
Injections: 1. 2 µL
2. 30 µL

Same efficiency as analytical column

Want to see how Axia pre-packed columns outlast and outperform all others?

See page 31.

Purification of Synthetic Oligonucleotides

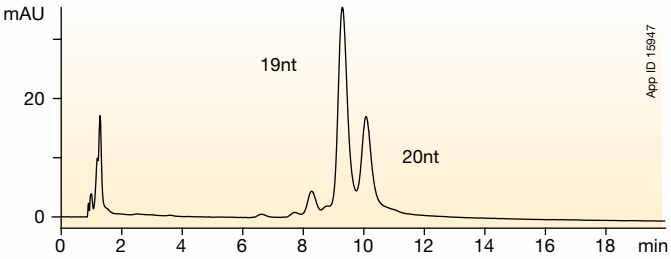
Clarity Oligo-RP™

Unique media specifically designed for the reversed phase purification of oligonucleotides with balanced hydrophobicity and polar selectivity. The media is based on composite particle TWIN™ technology that provides improved selectivity and efficiency for oligonucleotides when compared to competing hybrid, polymer, and silica media.

RP-HPLC Preparative Purification

- Easily separate N-1 failure sequences from target oligo with > 90 % purities
- Purify oligos up to 60 nt in length
- Trityl-off purification of DNA, RNA, thioates, and modified/labeled oligonucleotides
- 3 µm, 5 µm, 10 µm particles for seamless scaling

Preparative 20nt DNA Oligo-RP Purification



Column: Clarity 3 µm Oligo-RP C18
Dimensions: 50 x 10 mm
Part No.: 00B-4441-N0
Mobile Phase: A: 50 mM TEAA pH 7.5/ 5 % Acetonitrile
B: Methanol
Gradient: 10 % to 60 % B in 20 minutes
Flow Rate: 5 mL /min
Detection: UV @ 260 nm
Sample: 20nt DNA

Clarity Oligo-WAX™

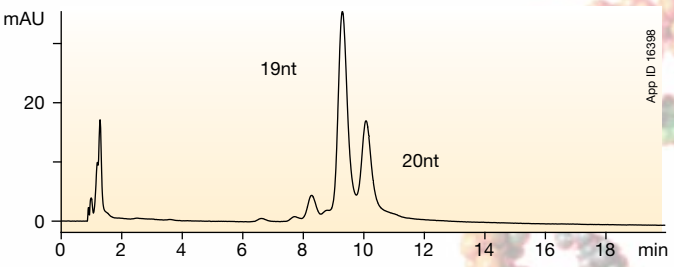
Clarity Oligo-WAX is a crosslinked weak anion exchanger media designed for successful ion-exchange purification of synthetic DNA/RNA. Oligo-WAX is an advantageous combination of purity, capacity, mechanical strength, cost, and efficiency.

- Excellent efficiency column results in > 90 % purities due to good fractionation of closely eluting compounds
- High loading capacity due to very high density ligand
- Increase productivity by running at higher flow rates and pressures

Purify Failure Sequences and Contaminants from Target Sequence

Ion-exchange is an excellent separation mode for purifying contaminants and failure sequences from target sequences. Clarity Oligo-WAX, due to its increased efficiency compared to other ion-exchange columns, has the ability to recognize minute charge differences in nucleotide sequences such as failure sequences or base substitutions.

DNA Purification of N-1 Sequence from Target N Sequence



Column: Clarity 10 µm Oligo-WAX
Dimensions: 150 x 4.6 mm
Part No.: 00F-4451-E0
Mobile Phase: A: Water
B: Acetonitrile
C: 100 mM Tris, pH 8
D: 2 M NaCl
Gradient: A/B/C/D (70:10:20:0) to (10:10:20:60) in 20 min
Flow Rate: 2.2 mL/min
Detection: UV-Vis Abs.-Diode Array (ambient)
Sample: Depurinated A & G and 20mer DNA

Premium
Low/Medium Pressure Purifications

Ordering Information

	Phase	Phase Description	MW Range	Common Applications	100 g	1 kg	10 kg
Polymer Sepra-ZT Small Pore Polymer Resin	Sepra ZT (30 µm, 85 Å)	Pyrrolidone modified styrenedivinylbenzene polymer	≤ 10 kDa	Reversed phase, hydrophobic, polar or aromatic, small molecule selectivity from aqueous samples in pH 1-14 including peptides and small proteins	04G-4426	04K-4426	04M-4426
	Sepra ZT-SCX (30 µm, 85 Å)	Sulfonic acid modified styrenedivinylbenzene polymer	≤ 10 kDa	Strong ion-exchange of cationic or aromatic, small molecule selectivity from aqueous samples in pH 1-14 including peptides and small proteins	04G-4466	04K-4466	Inquire
	Sepra ZT-WCX (30 µm, 85 Å)	Carboxylic acid modified styrenedivinylbenzene polymer	≤ 10 kDa	Weak ion-exchange of cationic or aromatic, small - large molecule selectivity from aqueous samples in pH 1-14 including peptides and small – large proteins	04G-4478	04K-4478	Inquire
	Sepra ZT-SAX (30 µm, 85 Å)	Quaternary amine modified styrene-divinylbenzene polymer	≤ 10 kDa	Strong ion-exchange of anionic or aromatic, small molecule selectivity from aqueous samples in pH 1-14 including peptides and small proteins	04G-4485	04K-4485	Inquire
	Sepra ZT-WAX (30 µm, 85 Å)	Primary, secondary amine modified styrenedivinylbenzene polymer	≤ 10 kDa	Weak ion-exchange of anionic or aromatic, small molecule selectivity from aqueous samples in pH 1-14 including peptides and small proteins	04G-4463	Inquire	Inquire
Polymer Sepra-ZTL Large Pore Polymer Resin	Sepra ZTL (115 µm, 330 Å)	Large particle, large pore pyrrolidone modified styrenedivinylbenzene polymer	≤ 75 kDa	Reversed phase, hydrophobic, polar or aromatic, small - large molecule selectivity from aqueous samples in pH 1-14 including peptides and small – large proteins	04G-4470	04K-4470	Inquire
	Sepra ZTL-SCX (115 µm, 330 Å)	Large particle, large pore sulfonic acid modified styrenedivinylbenzene polymer	≤ 75 kDa	Strong ion-exchange of cationic or aromatic, small - large molecule selectivity from aqueous samples in pH 1-14 including peptides and small - large proteins	04G-4467	04K-4467	Inquire
	Sepra ZTL-WCX (115 µm, 330 Å)	Large particle, large pore carboxylic acid modified styrenedivinylbenzene polymer	≤ 75 kDa	Weak ion-exchange of cationic or aromatic, small - large molecule selectivity from aqueous samples in pH 1-14 including peptides and small – large proteins	Inquire	Inquire	Inquire
	Sepra ZTL-SAX (115 µm, 330 Å)	Large particle, large pore quaternary amine modified styrenedivinylbenzene polymer	≤ 75 kDa	Strong ion-exchange of anionic or aromatic, small - large molecule selectivity from aqueous samples in pH 1-14 including peptides and small – large proteins	Inquire	Inquire	Inquire
	Sepra ZTL-WAX (115 µm, 330 Å)	Large particle, large pore primary, secondary amine modified styrenedivinylbenzene polymer	≤ 75 kDa	Weak ion-exchange of anionic or aromatic, small - large molecule selectivity from aqueous samples in pH 1-14 including peptides and small – large proteins	04G-4494	04K-4494	Inquire
Silica Sepra™ 100% Silica Resin	Sepra C18-E (50 µm, 65 Å)	Endcapped silica-based C18	≤ 10 kDa	Reversed phase, hydrophobic, small molecule selectivity from aqueous samples	04G-4348	04K-4348	04M-4348
	Sepra C18-T (50 µm, 135 Å)	Wide pore endcapped silica-based C18	≤ 45 kDa	Reversed phase, hydrophobic, small-medium molecule selectivity from aqueous samples, including peptides and small proteins	04G-4405	04K-4405	04M-4405
	Sepra C8 (50 µm, 65 Å)	Endcapped silica-based C8	≤ 10 kDa	Reversed phase, hydrophobic, small molecule selectivity from aqueous samples	04G-4406	04K-4406	Inquire
	Sepra Phenyl (50 µm, 65 Å)	Endcapped silica-based phenyl	≤ 10 kDa	Reversed phase, hydrophobic and aromatic, small molecule selectivity from aqueous samples	04G-4407	04K-4407	Inquire
	Sepra CN (50 µm, 65 Å)	Unendcapped silica-based cyano	≤ 10 kDa	Reversed or normal phase, pi electron/ aromatic, small molecule selectivity from aqueous or organic samples	04G-4409	04K-4409	Inquire
	Sepra NH_2 (50 µm, 65 Å)	Unendcapped silica-based primary amine	≤ 10 kDa	Reversed or normal phase, anion or polar, small molecule selectivity from aqueous or organic samples	04G-4408	04K-4408	04M-4408
	Sepra Florisil® (170 µm, 80 Å)	Magnesium silicate Pesticide Residue Grade Florisil	≤ 10 kDa	Normal phase, polar, small molecule selectivity from organic samples	04G-4411	04K-4411	Inquire
	Sepra SCX (50 µm, 65 Å)	Silica-based sulfonic acid	≤ 10 kDa	Strong ion-exchange of cationic small molecules from aqueous or organic samples including peptides and small proteins	04G-4413	04K-4413	Inquire
	Sepra SAX (50 µm, 65 Å)	Silica-based quaternary amine	≤ 10 kDa	Strong ion-exchange of anionic small molecules from aqueous or organic samples	04G-4414	04K-4414	Inquire
	Sepra WCX (55 µm, 70 Å)	Silica-based carboxylic acid	≤ 10 kDa	Weak ion-exchange of cationic small molecules from aqueous or organic samples including peptides and small proteins	04G-S027	04K-S027	Inquire
	Sepra Silica (50 µm, 65 Å)	Unendcapped silica	≤ 10 kDa	Normal phase, polar, small molecule selectivity from organic samples	04G-4410	04K-4410	Inquire
	Sepra EPH (200 µm, 70 Å)	Large particle, specialty normal phase silica	≤ 10 kDa	Specialty resin for extractable petroleum hydrocarbon analysis	04G-4508	04K-4508	Inquire
Sepra SDB-L (95 µm, 255 Å)		Styrenedivinylbenzene polymer	≤ 75 kDa	Reversed phase, hydrophobic or aromatic, small – large molecule selectivity from aqueous samples in pH 1-14 including peptides and small - large proteins	04G-4412	04K-4412	Inquire

Novel Pre-packed Preparative Columns

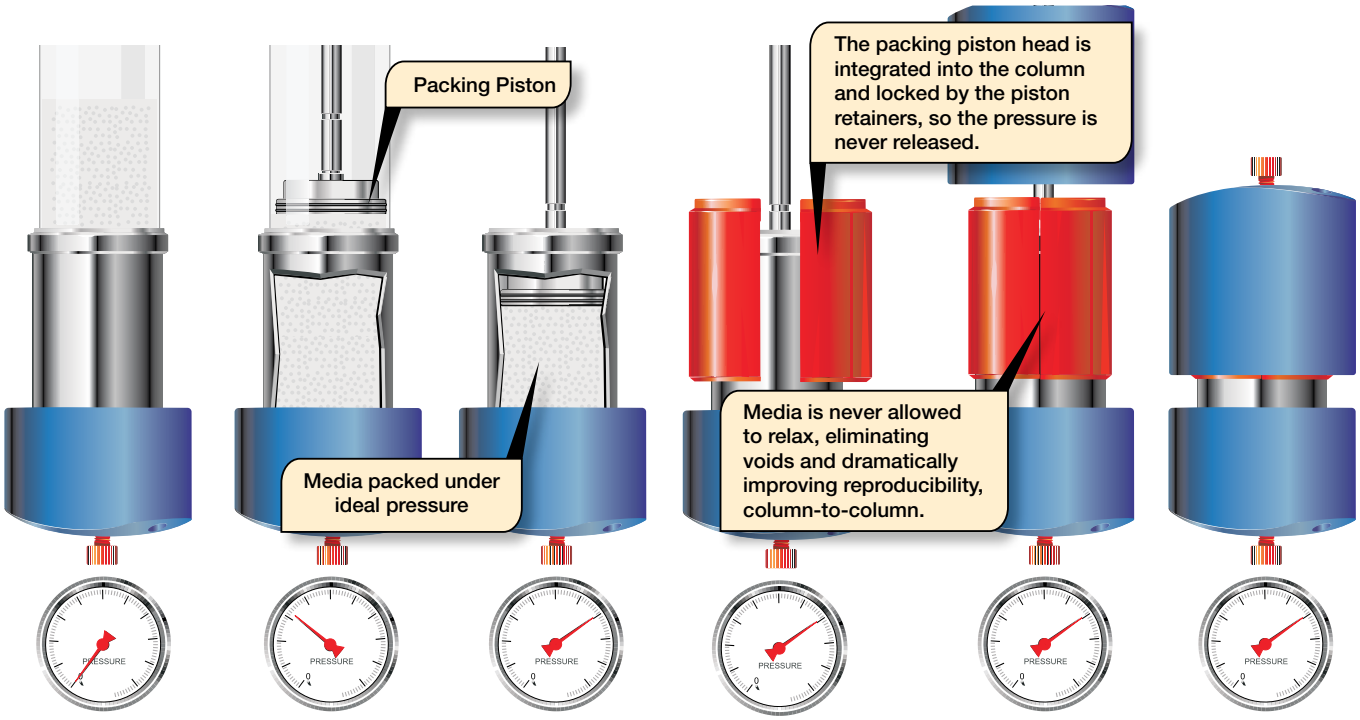
As a professional in preparative chromatography, you understand that proper scale-up development can lead to increased production yields. The best way to guarantee scalability of your purification is to use a scout column that mimics the performance of your large preparative DAC (Dynamic Axial Compression) column.

The Axia patented packing technology (available in 21.2, 30 and 50 mm ID) is completely automated and monitored by multiple sensors allowing measurement and recording of all process parameters for every column. The result is an improved, more reproducible packing process that offers efficiencies and peak symmetries on par with DAC purification.

Excellent Performance

- Excellent reproducibility
- Higher efficiency
- Over 20 unique selectivities in bulk media particle sizes
- SecurityGuard PREP available for longer column lifetimes

Axia Packing Advantage



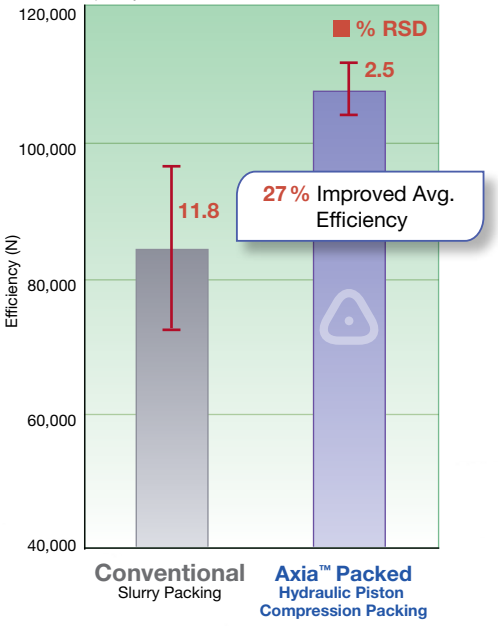
Visit: www.phenomenex.com/axia to view a packing demonstration.

Unmatched
Column Reproducibility

The Axia packing process provides optimum bed densities that can be consistently reproduced column-to-column. This directly translates into consistent efficiency and peak asymmetry measurements and decreases the column variability seen in traditionally packed preparative columns.

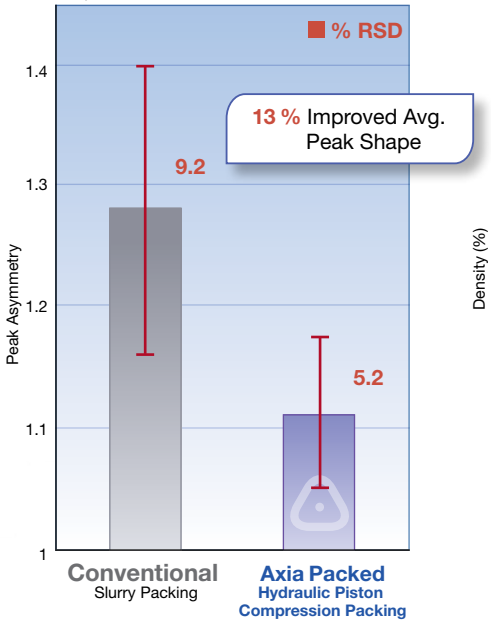
Reproducible
Column-to-Column Efficiency

Average Efficiency (N) with Synergi™
4 µm Hydro-RP 100 x 21.2 mm

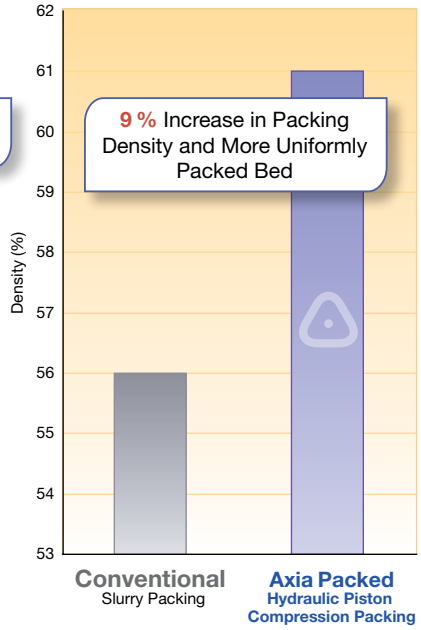


Reproducible
Column-to-Column Peak Asymmetry

Average Peak Asymmetry with Gemini®
5 µm C18 50 x 21.2 mm



Density Comparison of Packed Beds



"
- Extremely long lifetime (8000 injections)
- Columns show very good efficiency
- No significant changes concerning the backpressure
- So far there is no comparable column for this application like the Luna-Axia C18(2), 5 µm in 50 x 21.2 "

Bayer Schering Pharma, Wuppertal Germany

Media Comparison Guide

Phenomenex media offers identical performance from analytical to large process scale, and is available in a wide range of particle sizes, all supported in over 70 countries.

Proven Lifetime and Performance

Luna®

High surface area (100 Å; 400 m²/g) for maximum sample loading and resolution of closely eluting peaks

						Applications						Type of Compounds				Loading	Page
												Neutrals					8-12
Packing Material	Particle Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	pH Range	Small Molecules	Peptides	Proteins	Chiral	Oligonu-cleotides	Capture and Concentrate	Acids	Polar	Hydro-phobic	Bases	Available Surface Area	
Luna C18 (3)	10-*PREP*	100	400	17.5	1.5-10.0*	●	●					◐		●	◐	●	
Luna C18 (2)	3, 5, 10, 10-*PREP*, 15	100	400	17.5	1.5-10.0*	●	●					◐		●	◐	●	
Luna C8(2)	3, 5, 10, 10-*PREP*, 15	100	400	13.5	1.5-10.0*	●	●					◐		●	◐	●	
Luna C4(2)	10-*PREP*	100	400	8	1.5-10.0*	●	●					◐		●	◐	●	
Luna Phenyl-Hexyl	3, 5, 10, 10-*PREP*, 15	100	400	17.5	1.5-10.0*	●	●					◐	◐	●	◐	●	
Luna Silica (3)	10-*PREP*	100	400	-	-	●						◐	◐		◐	●	
Luna Silica (2)	3, 5, 10, 10-*PREP*, 15	100	400	-	-	●						◐	◐		◐	●	
Luna CN	3, 5, 10	100	400	7	1.5-7.0	●						◐	◐		◐	●	
Luna NH_2	3, 5, 10	100	400	9.5	1.5-11.0	●						◐	◐		◐	●	
Luna SCX	5, 10	100	400		2-7.0	●									●	●	

*pH range is 1.5-10 under isocratic conditions and 1.5-8.5 under gradient condtions.

Increased Loadability for Biomolecule Separations

Jupiter®

Jupiter 300 Å - Provides excellent resolution between proteins with similar properties. Optimal for the separation of intact proteins > 10,000 MW. Jupiter Proteo - Resolves Peptides and Small Proteins < 10, 000 MW

						Applications						Type of Compounds				Loading	Page
												Neutrals					13-17
Packing Material	Particle Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	pH Range	Small Molecules	Peptides	Proteins	Chiral	Oligonu-cleotides	Capture and Concentrate	Acids	Polar	Hydro-phobic	Bases	Available Surface Area	
Jupiter C18	5, 10, 15	300	170	13.3	1.5-10.0			●				◐		●	◐	●	
Jupiter C4	5, 10, 15	300	170	5	1.5-10.0			●				◐		●	◐	●	
Jupiter Proteo	4, 10	90	475	15	1.5-10.0	●	●					◐		●	◐	●	

Unique Reversed Phase Chemistries for Complex Mixtures

Synergi™

Alternative selectivity to C18 that offers increased retention of small polar and/or aromatic compounds in HPLC and SFC

						Applications						Type of Compounds				Loading	Page
												Neutrals					18-20
Packing Material	Particle Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	pH Range	Small Molecules	Peptides	Proteins	Chiral	Oligonu-cleotides	Capture and Concentrate	Acids	Polar	Hydro-phobic	Bases	Available Surface Area	
Synergi Fusion-RP	4, 10	80	475	12	1.5-10.0*	●							●	●		●	
Synergi Max-RP	4, 10	80	475	17	1.5-10.0*	●						◐		●	◐	●	
Synergi Hydro-RP	4, 10	80	475	19	1.5-7.5	●							●	●		●	
Synergi Polar-RP	4, 10	80	475	11	1.5-7.0	●							●			●	

*pH range is 1.5-10 under isocratic conditions and 1.5-9.0 under gradient condtions.

High pH Process Separations

Gemini®

pH stable (1-12) media optimal for high alkaline washes and high pH purifications of basic drugs

Packing Material	Particle Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	pH Range	Applications: Small Molecules	Peptides	Proteins	Chiral	Oligonucleotides	Capture and Concentrate	Type of Compounds: Neutrals: Acids	Polar	Hydrophobic	Bases	Loading: Available Surface Area	Page
																	21-23
Gemini C18	3, 5 , 10	110	375	14	1.0-12.0	●	●					●		●	●	●	

Polysaccharide Supports with Excellent Enantioselectivity

Lux®

Unique polysaccharide chiral phases for HPLC, SMB, and SFC

Packing Material	Particle Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	pH Range	Applications: Small Molecules	Peptides	Proteins	Chiral	Oligonucleotides	Capture and Concentrate	Type of Compounds: Neutrals: Acids	Polar	Hydrophobic	Bases	Loading: Available Surface Area	Page
																	24-27
Lux Cellulose-1	5, 10, 20	1,000	-	-	2-9.0				●								
Lux Cellulose-2	5, 10, 20	1,000	-	-	2-9.0				●								
Lux Cellulose-3	5, 20	1,000	-	-	2-9.0				●								
Lux Cellulose-4	5, 20	1,000	-	-	2-9.0				●								

Purification and Analysis of Synthetic Oligonucleotides

Clarity® Oligo-RP™ and Clarity Oligo-WAX™

RP-HPLC purification of failure from target sequences

Packing Material	Particle Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	pH Range	Applications: Small Molecules	Peptides	Proteins	Chiral	Oligonucleotides	Capture and Concentrate	Type of Compounds: Neutrals: Acids	Polar	Hydrophobic	Bases	Loading: Available Surface Area	Page
																	28
Oligo-RP	3, 5, 10	110	375	14	1.0-12.0					●		◐		●	◐	●	
Oligo-WAX	10	360	-	-	1.0-11.0					●		●				◐	

Premium Low/Medium Pressure Purifications

Sepra™

Capture and Concentrate Compounds of Interest

Packing Material	Particle Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	pH Range	Applications: Small Molecules	Peptides	Proteins	Chiral	Oligonucleotides	Capture and Concentrate	Type of Compounds: Neutrals: Acids	Polar	Hydrophobic	Bases	Loading: Available Surface Area	Page
																	29
Sepra	See page 29										●	See page 29					

Key ● Best Suited ◐ Very Good

Ordering Information

Scout Columns

Achiral Media

Luna (100 Å)

Phases	250 x 4.6	250 x 10
10 µm	Inquire	Inquire
C18(2)	00G-4253-E0	00G-4253-N0
C8(2)	00G-4250-E0	00G-4250-N0
Phenyl-Hexyl	00G-4285-E0	00G-4285-N0
Silica(2)	00G-4091-E0	00G-4091-N0
CN	00G-4300-E0	00G-4300-N0
NH_2	00G-4379-E0	00G-4379-N0
SCX	00G-4401-E0	00G-4401-N0
10 µm-*PREP*	Inquire	Inquire
C18(3)	00G-4616-E0	00G-4616-N0
C18(2)	00G-4324-E0	00G-4324-N0
C8(2)	00G-4323-E0	00G-4323-N0
C4(2)	00G-4460-E0	00G-4460-N0
Phenyl-Hexyl	00G-4325-E0	00G-4325-N0
Silica(3)	00G-4617-E0	00G-4617-N0
Silica(2)	00G-4322-E0	00G-4322-N0
15 µm	Inquire	Inquire
C18(2)	00G-4273-E0	00G-4273-N0
C8(2)	00G-4272-E0	00G-4272-N0
Phenyl-Hexyl	00G-4286-E0	00G-4286-N0
Silica(2)	00G-4271-E0	00G-4271-N0

Jupiter (300 Å and 90 Å)

Phases	250 x 4.6	250 x 10
10 µm	Inquire	Inquire
300 Å C18	00G-4055-E0	00G-4055-N0
300 Å C4	00G-4168-E0	00G-4168-N0
Proteo 90 Å	00G-4397-E0	00G-4397-N0
15 µm	Inquire	Inquire
300 Å C18	00G-4057-E0	00G-4057-N0
300 Å C4	00G-4169-E0	00G-4169-N0

Synergi (80 Å)

Phases	250 x 4.6	250 x 10
10 µm	Inquire	Inquire
Fusion-RP	00G-4425-E0	00G-4425-N0
Max-RP	00G-4350-E0	00G-4350-N0
Hydro-RP	00G-4376-E0	00G-4376-N0
Polar-RP	00G-4351-E0	00G-4351-N0

Gemini (110 Å)

Phases	250 x 4.6	250 x 10
10 µm	Inquire	Inquire
C18	00G-4436-E0	00G-4436-N0

Clarity

Phases	250 x 4.6	250 x 10
10 µm	Inquire	Inquire
Clarity Oligo-RP	00G-4445-E0	00G-4445-N0
Clarity Oligo-WAX	00G-4451-E0	00G-4451-N0

Chiral Media

Lux (1000 Å)

Phases	250 x 4.6	250 x 10
10 µm	Inquire	Inquire
Lux Cellulose-1	00G-4501-E0	00G-4501-N0
Lux Cellulose-2	00G-4502-E0	00G-4502-N0
20 µm	Inquire	Inquire
Lux Cellulose-1	00G-4473-E0	00G-4473-N0
Lux Cellulose-2	00G-4464-E0	00G-4464-N0
Lux Cellulose-3	00G-4504-E0	00G-4504-N0
Lux Cellulose-4	00G-4503-E0	00G-4503-N0

Additional scout columns available.
Contact us for 3 µm, 4 µm, and 5 µm media scout columns.

Bulk Media

Achiral Media

Luna (100 Å)

Phases	100 g	1 kg	5 kg	10 kg	50 kg	100 kg
10 µm	Inquire	Inquire	Inquire	Inquire	Inquire	Inquire
C18(2)	04G-4253	04K-4253	04L-4253	04M-4253	04N-4253	04P-4253
C8(2)	04G-4250	04K-4250	04L-4250	04M-4250	04N-4250	04P-4250
Phenyl-Hexyl	04G-4285	04K-4285	04L-4285	04M-4285	04N-4285	04P-4285
Silica(2)	04G-4091	04K-4091	04L-4091	04M-4091	04N-4091	04P-4091
CN	04G-4300	04K-4300	04L-4300	04M-4300	04N-4300	04P-4300
NH_2	04G-4379	04K-4379	04L-4379	04M-4379	04N-4379	04P-4379
SCX	04G-4401	04K-4401	04L-4401	04M-4401	04N-4401	04P-4401
10 µm-*PREP*	Inquire	Inquire	Inquire	Inquire	Inquire	Inquire
C18(3)	04G-4616	04K-4616	04L-4616	04M-4616	04N-4616	04P-4616
C18(2)	04G-4324	04K-4324	04L-4324	04M-4324	04N-4324	04P-4324
C8(2)	04G-4323	04K-4323	04L-4323	04M-4323	04N-4323	04P-4323
C4(2)	04G-4460	04K-4460	04L-4460	04M-4460	04N-4460	04P-4460
Phenyl-Hexyl	04G-4325	04K-4325	04L-4325	04M-4325	04N-4325	04P-4325
Silica(3)	04G-4617	04K-4617	04L-4617	04M-4617	04N-4617	04P-4617
Silica(2)	04G-4322	04K-4322	04L-4322	04M-4322	04N-4322	04P-4322
15 µm	Inquire	Inquire	Inquire	Inquire	Inquire	Inquire
C18(2)	04G-4273	04K-4273	04L-4273	04M-4273	04N-4273	04P-4273
C8(2)	04G-4272	04K-4272	04L-4272	04M-4272	04N-4272	04P-4272
Phenyl-Hexyl	04G-4286	04K-4286	04L-4286	04M-4286	04N-4286	04P-4286
Silica(2)	04G-4271	04K-4271	04L-4271	04M-4271	04N-4271	04P-4271

Jupiter (300 Å and 90 Å)

Phases	100 g	1 kg	5 kg	10 kg	50 kg	100 kg
10 µm	Inquire	Inquire	Inquire	Inquire	Inquire	Inquire
300 Å C18	04G-4055	04K-4055	04L-4055	04M-4055	04N-4055	04P-4055
300 Å C4	04G-4168	04K-4168	04L-4168	04M-4168	04N-4168	04P-4168
Proteo 90 Å	04G-4397	04K-4397	04L-4397	04M-4397	04N-4397	04P-4397
15 µm	Inquire	Inquire	Inquire	Inquire	Inquire	Inquire
300 Å C18	04G-4057	04K-4057	04L-4057	04M-4057	04N-4057	04P-4057
300 Å C4	04G-4169	04K-4169	04L-4169	04M-4169	04N-4169	04P-4169

Synergi (80 Å)

Phases	100 g	1 kg	5 kg	10 kg	50 kg	100 kg
10 µm	Inquire	Inquire	Inquire	Inquire	Inquire	Inquire
Fusion-RP	04G-4425	04K-4425	04L-4425	04M-4425	04N-4425	04P-4425
Max-RP	04G-4350	04K-4350	04L-4350	04M-4350	04N-4350	04P-4350
Hydro-RP	04G-4376	04K-4376	04L-4376	04M-4376	04N-4376	04P-4376
Polar-RP	04G-4351	04K-4351	04L-4351	04M-4351	04N-4351	04P-4351

Gemini (110 Å)

Phases	100 g	1 kg	5 kg	10 kg
10 µm	Inquire	Inquire	Inquire	Inquire
C18	04G-4436	04K-4436	04L-4436	04M-4436

Clarity

Phases	100 g	1 kg	5 kg	10 kg
10 µm	Inquire	Inquire	Inquire	Inquire
Clarity Oligo-RP	04G-4445	04K-4445	04L-4445	04M-4445
Clarity Oligo-WAX	04G-4451	04K-4451	04L-4451	04M-4451

Chiral Media

Lux (1000 Å)

Phases	10 g	100 g	1 kg	5 kg	10 kg
10 µm	Inquire	Inquire	Inquire	Inquire	Inquire
Lux Cellulose-1	04D-4501	04G-4501	04K-4501	04L-4501	04M-4501
Lux Cellulose-2	04D-4502	04G-4502	04K-4502	04L-4502	04M-4502
20 µm	Inquire	Inquire	Inquire	Inquire	Inquire
Lux Cellulose-1	04D-4473	04G-4473	04K-4473	04L-4473	04M-4473
Lux Cellulose-2	04D-4464	04G-4464	04K-4464	04L-4464	04M-4464
Lux Cellulose-3	04D-4504	04G-4504	04K-4504	04L-4504	04M-4504
Lux Cellulose-4	04D-4503	04G-4503	04K-4503	04L-4503	04M-4503

Trust, Reliability, Performance

We are ready to partner with you

Technology advances through the synergy of customer experience, feedback and vendor action. Through our close relationships in the marketplace, we are well placed to handle your immediate needs today while leading innovation to meet your needs tomorrow.

Phenomenex Bulk Media Innovations Team

If you would like to place an order, try a scout column, have questions on media selection, our would like to improve your purification work, please contact us anytime. Our dedicated Prep team is willing and able to support your purchase and offer purification yields like nothing you've seen before.

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