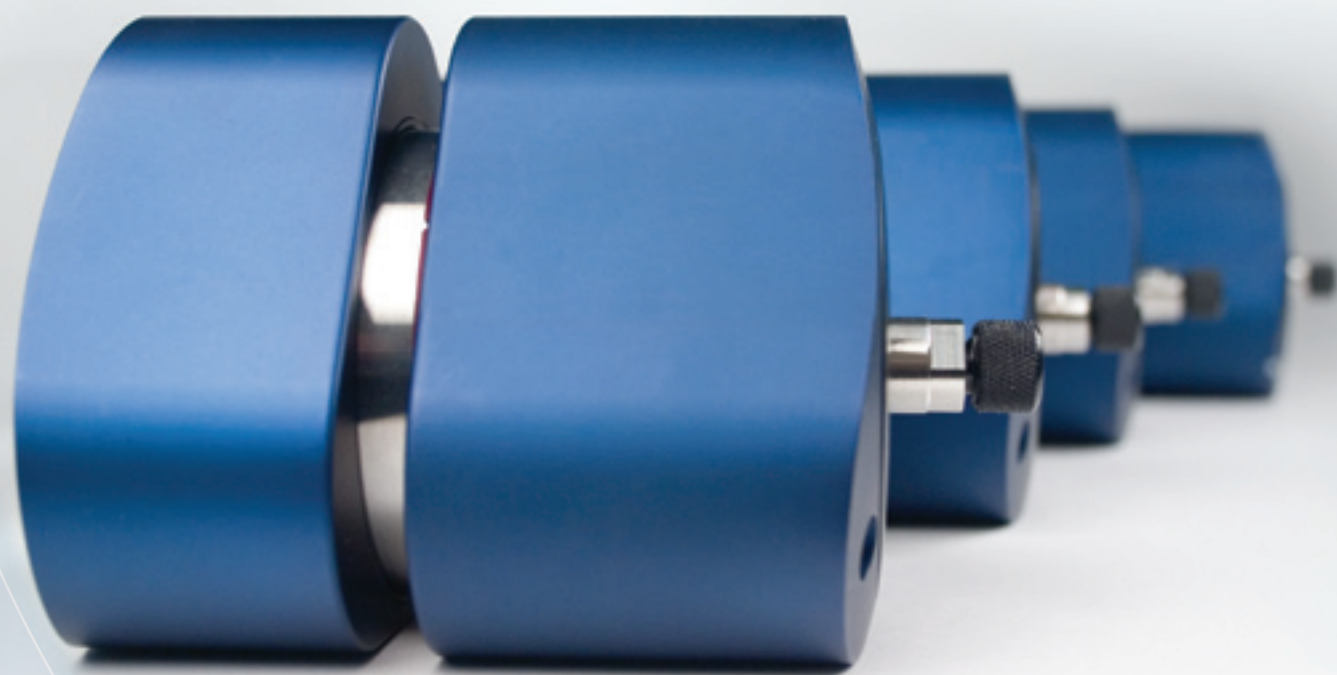




Preparative Chromatography Redefined



 **phenomenex**[®]
...breaking with tradition[™]



Expect an Excellent Axia™ Column. Every Time.

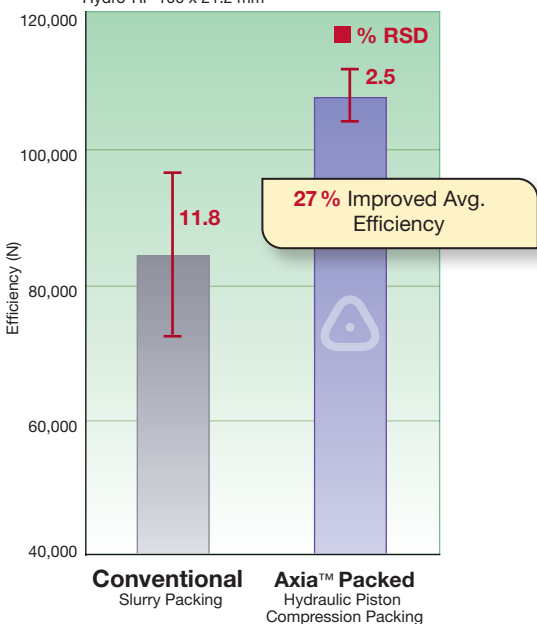
A completely automated packing system offers feedback control and infinite tuning of packing density to specific media characteristics such as mechanical strength and porosity. An optimum higher bed density can be consistently reproduced column-to-column. This directly trans-

lates into consistent efficiency and peak asymmetry measurements and decreases the column variability seen in traditionally packed preparative columns.

Consistent Quality. Column-to-Column. Batch-to-Batch.

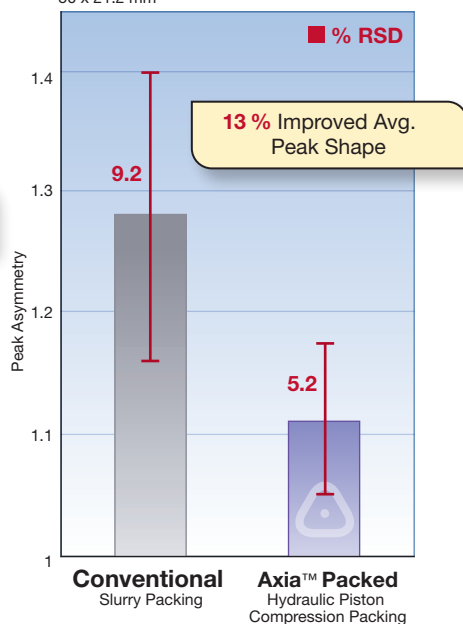
Reproducible Column-to-Column Efficiency

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

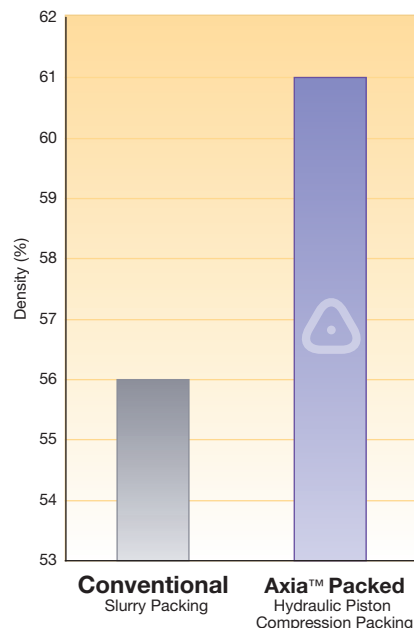


Reproducible Column-to-Column Peak Asymmetry

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



Density Comparison of Packed Beds



Selectivity Options. You Decide.



Small Molecules



- Worldwide accepted and trusted phases such as C18(2), C8(2), and Phenyl-Hexyl
- High surface area (100 Å; 400 m²/g) for increased sample loading
- Available in bulk media for process scale purifications
- Strong hydrophobic selectivity in both volatile and non-volatile buffers
- Extremely high loading capacity from a large surface area particle (110 Å; 375 m²/g)
- pH stable 1-12 for maximum durability
- Four unique selectivities resolve and separate mixtures of polar and non-polar compounds
- High surface area (80 Å; 475 m²/g) for increased sample loading
- Available in bulk media for process scale purifications

Chiral Molecules



Proteins & Peptides



Synthetic DNA/RNA



- Engineered to provide a straightforward approach to enantiomeric recognition and separation through HPLC and SFC
- Lux Cellulose-2 incorporates an advanced halogenated derivative, leading to unique enantioselectivity compared to previously commercialized cellulose phases
- Lux Cellulose-1 features a classical cellulose derivative used industry-wide for many enantiomeric separations and is a cost-effective replacement for CHIRALCEL® OD-H®
- 300 Å C18 and C4 columns designed to analyze and purify intact proteins
- Provides excellent resolution between proteins with similar properties
- 90 Å C12 (Proteo) columns engineered for increased peak capacity and resolution of peptide separations
- Direct scale-up to preparative and bulk materials
- Easily separate N-1 failure sequences from target oligo with > 90 % purities
- Baseline separation/collection of desired peak at preparative scale (5 µmole and greater)
- Long column lifetime due to extended pH stability and mechanical strength

Hydraulic Piston Compression

An advanced column packing and hardware design, Axia™ incorporates patent-pending Hydraulic Piston Compression technology to eliminate bed collapse as a source of failure in short preparative columns. Ideal bed density is custom calculated and automated for each support, chemistry, and column size. Computer control of the

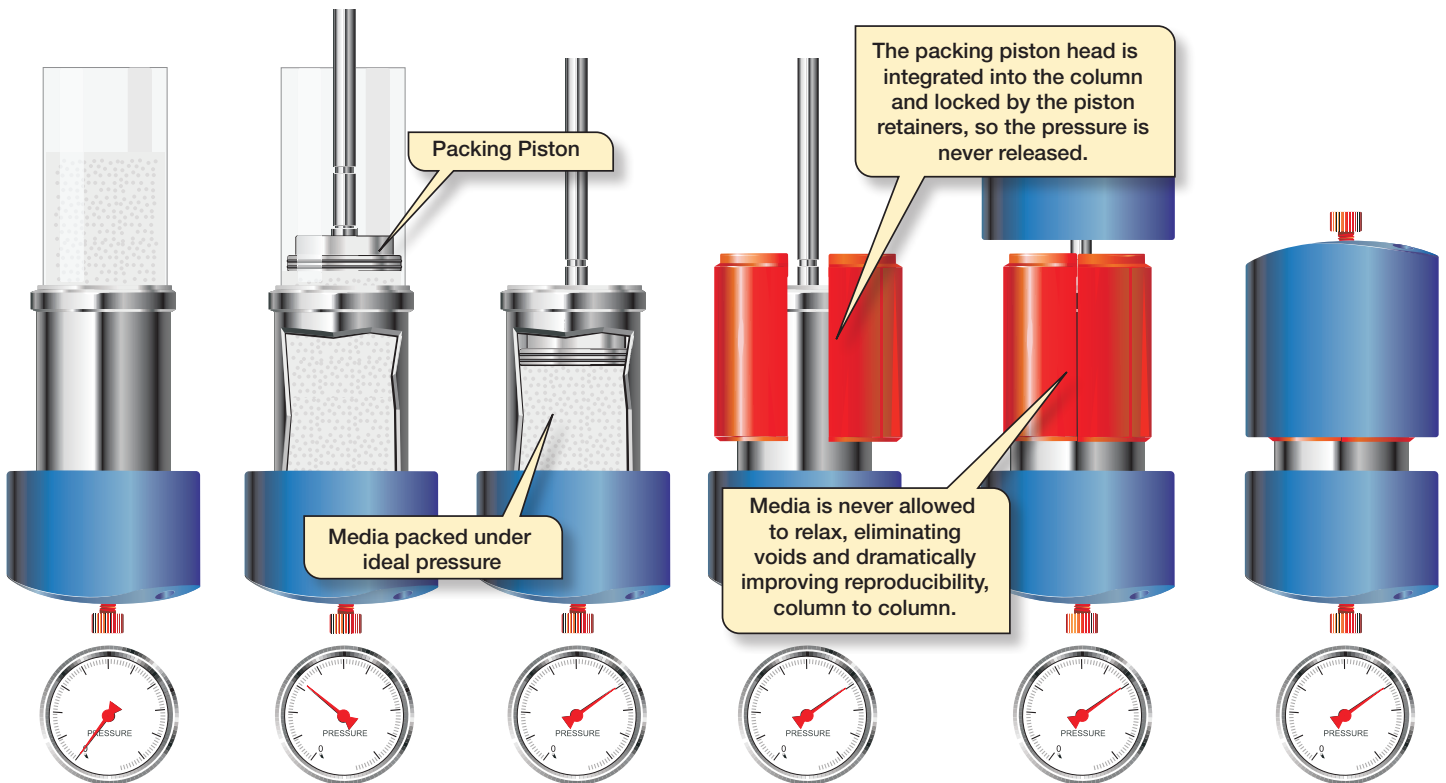
entire process assures both proper bed density and uniformity. Using a single, controlled hydraulic compression, the piston assembly is locked in place without allowing the media to decompress or “relax,” thus maintaining media and column bed integrity. Recompression of the bed is not required, as it is for other packing methodologies.

The result is an improved, repeatable packing process, giving preparative chromatographers:

- Extended column lifetime
- Improved peak shape
- Reproducibility: column-to-column
- Increased loadability
- Higher efficiency
- Stability under high flow rates

See the technology in action!
Please visit www.AxiaPrep.com

Axia Packing Process



Axia™ Scalability

Two Options to Increase Sample Load

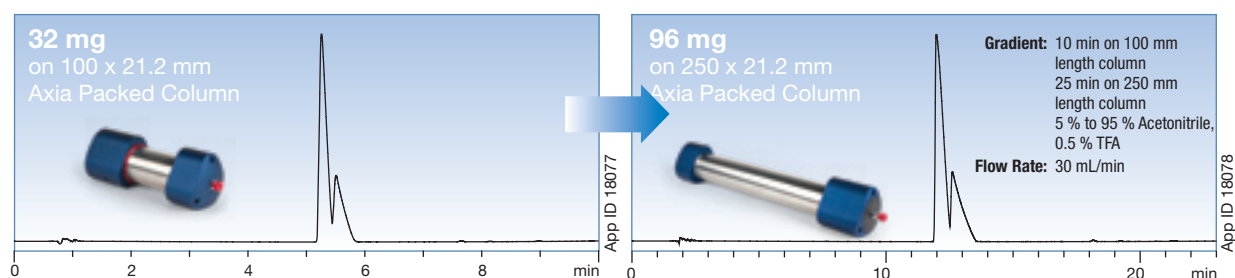


Option 1: Increase Column Length

Increase sample load without increasing your flow rate by using a longer column. With Axia technology, each preparative column is optimized for:

- Analytical-like efficiency
- Long column lifetime
- High sample load with high-surface area media such as Gemini®-NX, Luna® or Synergi™

As a result, load generally increases as a direct proportion to column length. In this example the sample load **tripled** by increasing column length.

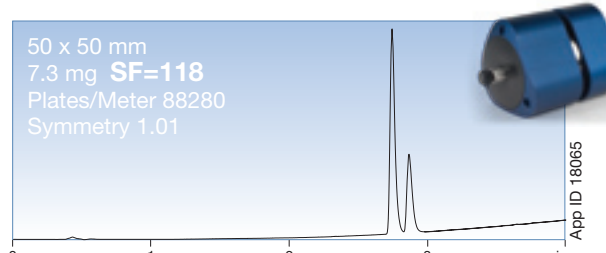
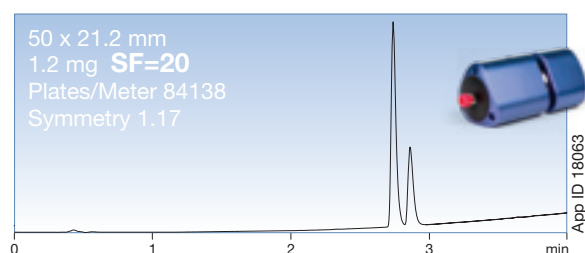
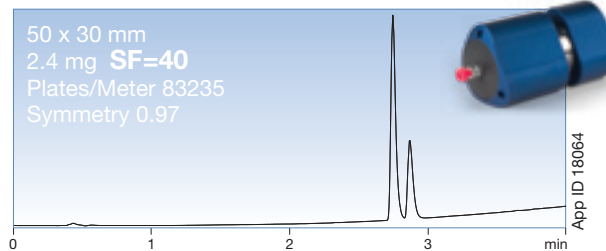
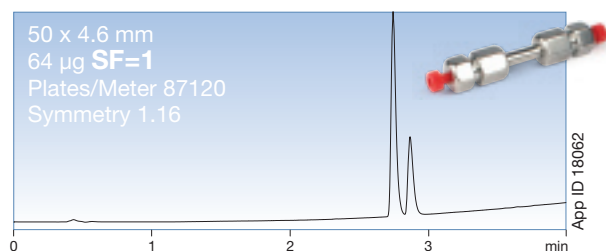


Option 2: Increase Column ID

For maximizing load without increasing the run time, consider scaling up to a larger column ID. Axia packed columns provide the three important benefits you need.

- Reproducible performance across all column diameters
- Increased throughput without sacrificing purity
- High efficiency from analytical to preparative

Column: Luna 5 µm C18(2)
Gradient: 5 min, 5% to 95% Water/Acetonitrile, 0.5% TFA
Flow Rate: 1.5 mL/min on 4.6 mm
30 mL/min on 21.2 mm
60 mL/min on 30 mm
150 mL/min on 50 mm
Detection: UV @ 254 nm
Sample: 1. Propranolol
2. Diphenhydramine



SF = Scaling Factor

Ordering Information



2006 R&D 100
Award Recipient

SecurityGuard™
Cartridges (mm)

Phase	50 x 21.2 mm	100 x 21.2 mm	150 x 21.2 mm	250 x 21.2 mm	50 x 30 mm	100 x 30 mm	150 x 30 mm	250 x 30 mm	50 x 50 mm	100 x 50 mm	150 x 50 mm	250 x 50 mm	30.0**
Clarity 5 µm Oligo-RP	—	00D-4442-P0-AX	—	00G-4442-P0-AX	00D-4442-U0-AX	—	00F-4445-U0-AX	00G-4442-U0-AX	—	—	—	—	AJ0-8210
Clarity 10 µm Oligo-RP	—	—	00F-4445-P0-AX	00G-4445-P0-AX	—	—	00F-4445-U0-AX	—	—	—	00F-4445-V0-AX	00G-4445-V0-AX	AJ0-8310
Gemini 5 µm C18	00B-4435-P0-AX	00D-4435-P0-AX	00F-4435-P0-AX	00G-4435-P0-AX	00B-4435-U0-AX	00D-4435-U0-AX	00F-4435-U0-AX	00G-4435-U0-AX	00B-4435-V0-AX	—	—	—	AJ0-8308
Gemini 10 µm C18	00B-4436-P0-AX	00D-4436-P0-AX	00F-4436-P0-AX	00G-4436-P0-AX	00B-4436-U0-AX	00D-4436-U0-AX	00F-4436-U0-AX	00G-4436-U0-AX	00B-4436-V0-AX	00D-4436-V0-AX	00F-4436-V0-AX	00G-4436-V0-AX	AJ0-8308
Gemini 5 µm C6-Phenyl	00B-4444-P0-AX	00D-4444-P0-AX	00F-4444-P0-AX	00G-4444-P0-AX	00B-4444-U0-AX	00D-4444-U0-AX	00F-4444-U0-AX	00G-4444-U0-AX	—	—	—	—	AJ0-8303
Gemini-NX 5 µm C18	00B-4454-P0-AX	00D-4454-P0-AX	00F-4454-P0-AX	00G-4454-P0-AX	00B-4454-U0-AX	00D-4454-U0-AX	00F-4454-U0-AX	00G-4454-U0-AX	00B-4454-V0-AX	—	—	—	AJ0-8371
Gemini-NX 10 µm C18	00B-4455-P0-AX	00D-4455-P0-AX	00F-4455-P0-AX	00G-4455-P0-AX	00B-4455-U0-AX	00D-4455-U0-AX	00F-4455-U0-AX	00G-4455-U0-AX	00B-4455-V0-AX	00D-4455-V0-AX	00F-4455-V0-AX	00G-4455-V0-AX	AJ0-8371
Jupiter 10 µm C18	—	00D-4055-P0-AX	—	—	00D-4055-U0-AX	—	—	00G-4055-U0-AX	—	—	—	—	AJ0-7230
Jupiter 10 µm C4	—	00D-4168-P0-AX	00F-4168-P0-AX	00G-4168-P0-AX	—	—	00F-4168-U0-AX	00G-4168-U0-AX	—	—	—	—	AJ0-7231
Jupiter 4 µm Proteo	—	—	00G-4396-P0-AX	—	00F-4396-U0-AX	—	00F-4396-U0-AX	00G-4396-U0-AX	—	—	—	—	AJ0-7842
Jupiter 10 µm Proteo	—	00D-4397-P0-AX	00F-4397-P0-AX	00G-4397-P0-AX	00D-4397-U0-AX	00F-4397-U0-AX	00F-4397-U0-AX	00G-4397-U0-AX	—	—	—	00G-4397-V0-AX	AJ0-8304
Luna 5 µm C18(2)	00B-4252-P0-AX	00D-4252-P0-AX	00F-4252-P0-AX	00G-4252-P0-AX	00B-4252-U0-AX	00D-4252-U0-AX	00F-4252-U0-AX	00G-4252-U0-AX	00B-4252-V0-AX	—	—	—	AJ0-7839
Luna 10 µm C18(2)	00B-4253-P0-AX	00D-4253-P0-AX	00F-4253-P0-AX	00G-4253-P0-AX	00B-4253-U0-AX	00D-4253-U0-AX	00F-4253-U0-AX	00G-4253-U0-AX	00B-4253-V0-AX	00D-4253-V0-AX	00F-4253-V0-AX	00G-4253-V0-AX	AJ0-8301
Luna 5 µm C8(2)	00B-4249-P0-AX	00D-4249-P0-AX	00F-4249-P0-AX	00G-4249-P0-AX	00B-4249-U0-AX	00D-4249-U0-AX	00F-4249-U0-AX	00G-4249-U0-AX	00B-4249-V0-AX	—	—	—	AJ0-7840
Luna 10 µm C8(2)	00B-4250-P0-AX	00D-4250-P0-AX	00F-4250-P0-AX	00G-4250-P0-AX	00B-4250-U0-AX	00D-4250-U0-AX	00F-4250-U0-AX	00G-4250-U0-AX	00B-4250-V0-AX	00D-4250-V0-AX	00F-4250-V0-AX	00G-4250-V0-AX	AJ0-8302
Luna 5 µm CN	00B-4255-P0-AX	00D-4255-P0-AX	00F-4255-P0-AX	00G-4255-P0-AX	00B-4255-U0-AX	00D-4255-U0-AX	00F-4255-U0-AX	00G-4255-U0-AX	—	—	—	—	AJ0-8220
Luna 10 µm CN	—	00F-4300-P0-AX	00G-4300-P0-AX	—	00F-4300-U0-AX	00G-4300-U0-AX	—	00G-4300-U0-AX	—	—	00F-4300-V0-AX	00G-4300-V0-AX	AJ0-8311
Luna 5 µm NH ₂	—	00D-4378-P0-AX	00F-4378-P0-AX	00G-4378-P0-AX	00D-4378-U0-AX	00F-4378-U0-AX	00F-4378-U0-AX	00G-4378-U0-AX	—	—	—	—	AJ0-8162
Luna 10 µm NH ₂	—	—	00G-4379-P0-AX	—	00F-4379-U0-AX	00G-4379-U0-AX	—	00G-4379-U0-AX	—	—	—	00G-4379-V0-AX	AJ0-8309
Luna 5 µm PFP(2)	00B-4448-P0-AX	00D-4448-P0-AX	00F-4448-P0-AX	00G-4448-P0-AX	00B-4448-U0-AX	00D-4448-U0-AX	00F-4448-U0-AX	00G-4448-U0-AX	—	—	—	—	AJ0-8377
Luna 5 µm Phenyl-Hexyl	00B-4257-P0-AX	00D-4257-P0-AX	00F-4257-P0-AX	00G-4257-P0-AX	00B-4257-U0-AX	00D-4257-U0-AX	00F-4257-U0-AX	00G-4257-U0-AX	—	—	—	—	AJ0-7841
Luna 10 µm Phenyl-Hexyl	—	00F-4285-P0-AX	00G-4285-P0-AX	—	00F-4285-U0-AX	00G-4285-U0-AX	00F-4285-U0-AX	00G-4285-U0-AX	00B-4285-V0-AX	00D-4285-V0-AX	—	00G-4285-V0-AX	AJ0-8303
Luna 5 µm SCX	—	00D-4398-P0-AX	—	00G-4398-P0-AX	—	—	—	—	—	—	—	—	—
Luna 5 µm Silica(2)	00B-4274-P0-AX	00D-4274-P0-AX	00F-4274-P0-AX	00G-4274-P0-AX	00B-4274-U0-AX	00D-4274-U0-AX	00F-4274-U0-AX	00G-4274-U0-AX	—	—	—	—	AJ0-7229
Luna 10 µm Silica(2)	—	00D-4091-P0-AX	—	00G-4091-P0-AX	—	—	00F-4091-U0-AX	00G-4091-U0-AX	—	—	—	00G-4091-V0-AX	AJ0-8312
Lux 5 µm Cellulose-1	—	00D-4459-P0-AX	00F-4459-P0-AX	00G-4459-P0-AX	00B-4459-U0-AX	00D-4459-U0-AX	00F-4459-U0-AX	00G-4459-U0-AX	—	—	—	00G-4459-V0-AX	AJ0-8405
Lux 5 µm Cellulose-2	—	00D-4457-P0-AX	00F-4457-P0-AX	00G-4457-P0-AX	00B-4457-U0-AX	00D-4457-U0-AX	00F-4457-U0-AX	00G-4457-U0-AX	—	—	—	00G-4457-V0-AX	AJ0-8401
Synergi 4 µm Max-RP	00B-4337-P0-AX	00D-4337-P0-AX	00F-4337-P0-AX	00G-4337-P0-AX	00B-4337-U0-AX	00D-4337-U0-AX	00F-4337-U0-AX	00G-4337-U0-AX	—	—	—	—	AJ0-7842
Synergi 10 µm Max-RP	—	00D-4350-P0-AX	00F-4350-P0-AX	00G-4350-P0-AX	00B-4350-U0-AX	00D-4350-U0-AX	00F-4350-U0-AX	00G-4350-U0-AX	00B-4350-V0-AX	00D-4350-V0-AX	00F-4350-V0-AX	00G-4350-V0-AX	AJ0-8304
Synergi 4 µm Hydro-RP	00B-4375-P0-AX	00D-4375-P0-AX	00F-4375-P0-AX	00G-4375-P0-AX	00B-4375-U0-AX	00D-4375-U0-AX	00F-4375-U0-AX	00G-4375-U0-AX	—	—	—	—	AJ0-7843
Synergi 10 µm Hydro-RP	—	00F-4376-P0-AX	00G-4376-P0-AX	—	00F-4376-U0-AX	00G-4376-U0-AX	—	00G-4376-U0-AX	—	—	—	00G-4376-V0-AX	AJ0-8305
Synergi 4 µm Polar-RP	00B-4336-P0-AX	00D-4336-P0-AX	00F-4336-P0-AX	00G-4336-P0-AX	00B-4336-U0-AX	00D-4336-U0-AX	00F-4336-U0-AX	00G-4336-U0-AX	—	—	—	—	AJ0-7845
Synergi 10 µm Polar-RP	—	—	00G-4351-P0-AX	—	00F-4351-U0-AX	—	00F-4351-U0-AX	—	—	—	—	—	AJ0-8407
Synergi 4 µm Fusion-RP	00B-4424-P0-AX	00D-4424-P0-AX	00F-4424-P0-AX	00G-4424-P0-AX	00B-4424-U0-AX	00D-4424-U0-AX	00F-4424-U0-AX	00G-4424-U0-AX	—	—	—	—	AJ0-7844
Synergi 10 µm Fusion-RP	—	00F-4425-P0-AX	00G-4425-P0-AX	—	00F-4425-U0-AX	00G-4425-U0-AX	—	00G-4425-U0-AX	—	—	—	00G-4425-V0-AX	AJ0-8406

Additional Axia dimensions available-please contact your Phenomenex technical representative.

Trademarks

Clarity, Gemini, Jupiter and Luna are registered trademarks of Phenomenex, Inc. Axia, Lux, pH-LC, SecurityGuard and Synergi are trademarks of Phenomenex, Inc. CHIRALCEL and OD-H are registered trademarks of DAICEL Chemical Industries, Ltd.

Disclaimer

Subject to Phenomenex Standard Terms & Conditions, which may be viewed at www.phenomenex.com/TermsAndConditions.

© 2009 Phenomenex, Inc. All rights reserved.

for ID: 18-29 mm 30-49 mm
 *PREP SecurityGuard™ Cartridges require holder, Part No.: AJ0-8223
 **PREP SecurityGuard™ Cartridges require holder, Part No.: AJ0-8277

If Axia™ packed columns do not provide LONGER LIFETIME when used with SecurityGuard PREP, as compared to a competing column of the same particle size, phase and dimensions, send in your comparative data and the column within 45 days for a FULL REFUND.





Australia

t: 02-9428-6444
f: 02-9428-6445
auinfo@phenomenex.com

Austria

t: 01-319-1301
f: 01-319-1300
anfrage@phenomenex.com

Belgium

t: +31 (0)30-2418700
f: +31 (0)30-2383749
beinfo@phenomenex.com

Canada

t: (800) 543-3681
f: (310) 328-7768
info@phenomenex.com

Denmark

t: 4824 8048
f: 4810 6265
dkinfo@phenomenex.com

France

t: 01 30 09 21 10
f: 01 30 09 21 11
franceinfo@phenomenex.com

Germany

t: 06021-58830-0
f: 06021-58830-11
anfrage@phenomenex.com

Ireland

t: 01 247 5405
f: +44 1625-501796
eireinfo@phenomenex.com

Italy

t: 051 6327511
f: 051 6327555
italiainfo@phenomenex.com

Luxembourg

t: +31 (0)30-2418700
f: +31 (0)30-2383749
nlinfo@phenomenex.com

Netherlands

t: 030-2418700
f: 030-2383749
nlinfo@phenomenex.com

New Zealand

t: 09-4780951
f: 09-4780952
nzinfo@phenomenex.com

Puerto Rico

t: (800) 541-HPLC
f: (310) 328-7768
info@phenomenex.com

United Kingdom

t: 01625-501367
f: 01625-501796
ukinfo@phenomenex.com

**All other countries:
Corporate Office USA** 

t: (310) 212-0555
f: (310) 328-7768
info@phenomenex.com



www.phenomenex.com

Phenomenex products are available worldwide. For the distributor in your country, contact Phenomenex USA, International Department at international@phenomenex.com

BR65961208_L