Exceed your Purification Goals Guaranteed
The Axia™ Prep Column Advantage

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

Increased Column Lifetimes

An advanced column packing and hardware design, Axia incorporates patented Hydraulic Piston Compression technology to eliminate bed collapse as a source of failure in 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 every time. 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.

Axia Packing Advantage

- **Extended column lifetime**
- **Reproducibility:** column-to-column and batch-to-batch
- **Higher efficiency**
- **Improved peak shape**
- **Increased loadability**
- **Stability under high flow rates**
Unmatched Column Reproducibility

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

<table>
<thead>
<tr>
<th>Reproducible Column-to-Column Efficiency</th>
<th>Reproducible Column-to-Column Peak Asymmetry</th>
<th>Density Comparison of Packed Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average Efficiency (N)</strong> with Synergi™</td>
<td><strong>Average Peak Asymmetry with Gemini®</strong></td>
<td><strong>% RSD</strong> 11.8 2.5 61 53</td>
</tr>
<tr>
<td>4 µm Hydro-RP 100 x 21.2 mm</td>
<td>5 µm C18 50 x 21.2 mm</td>
<td>13 % Improved Avg. Peak Shape</td>
</tr>
<tr>
<td>11.8 27 % Improved Avg. Efficiency</td>
<td>9.2 5.2</td>
<td>9 % Increase in Packing Density and Uniformity of Packed Bed</td>
</tr>
</tbody>
</table>

Increased Load with the Right Selectivity

- Worldwide accepted and trusted phases, such as C18(2), C8(2), and Phenyl-Hexyl
- Available in bulk media for process scale purifications
- pH stable 1-12 for maximum durability
- Strong hydrophobic selectivity in both volatile and non-volatile buffers
- Four unique selectivities separate mixtures of polar and non-polar compounds
- Available in bulk media for process scale purifications

<table>
<thead>
<tr>
<th>Small Molecules</th>
<th>Chiral Molecules</th>
<th>Proteins &amp; Peptides</th>
<th>Synthetic DNA/RNA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eholo LUNA</td>
<td>X-LUX</td>
<td>Jupiter</td>
<td>CLARITY oligo-RP</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Gemini-NX pH-LC</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Synergi™</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

- Multiple polysaccharide-based chiral stationary phases available for screening
- Stable in Normal Phase, Polar Organic, SFC, and Reversed Phase Conditions
- Available in bulk media for process scale purifications
- 300 Å C18 and C4 columns designed to analyze and purify intact proteins
- 90 Å C12 (Proteo) columns engineered for increased peak capacity and resolution of peptide separations
- Direct scale-up to 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
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 in direct proportion to column length. In this example the sample load tripled by increasing column length.

**Option 2: Increase Column ID**
To maximize 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

**SF = Scaling Factor**
Seamless Scalability (cont’d)

Multiple Options to Increase Sample Load

**Option 3: Increase Mobile Phase pH to Increase Loadability***

Using a mobile phase with pH 2 units above the pKₐ of basic compounds increases retention in reversed phase chromatography.

- Increased retention can improve resolution and increase loadability
- Gemini®-NX is pH stable from 1-12

**pH 2.0**

- 1. Diphenhydramine
- 2. Prispersodol

**pH 10.5**

- 1. Diphenhydramine
- 2. Prispersodol

* For more detailed information, request technical note TN-1050, “Impact of pH on the Purity and Yield for Preparative Separations.”

---

**Chiral Purification Scale-up**

The combination of Lux® chiral media packed in Axia™ hardware and packing technology in an excellent solution for chiral purifications. Separation scales up directly based on column length.

**Conditions for all columns:**
- **Columns:** Lux 5 µm Cellulose-1
- **Dimensions:** as noted
- **Mobile Phase:** Methanol / Isopropanol (90:10)
- **Flow Rate:** as noted
- **Detection:** as noted
- **Sample:** Dissolved in mobile phase as noted

**Dimenisons:**
- 100 x 4.6 mm
- 100 x 21.2 mm
- 250 x 21.2 mm

**Flow Rate:**
- 1 mL/min
- 20 mL/min
- 20 mL/min

**Detection:**
- UV @ 220 nm
- UV @ 220 nm and 254 nm
- UV @ 220 nm and 254 nm

**Sample:**
- 5 µg in 2 µL
- 32 mg in 640 µL
- 80 mg in 1600 µL

---

*No resolution loss with increased sample load*
Supercritical Fluid Chromatography (SFC) Scale-Up

Axia™ Easily Scales Up Your SFC Applications

Increase column ID for higher loading and greater purification by SFC. Axia packed 21.2 mm diameter column provides the same performance as the 4.6 mm analytical screening column with increased sample capacity and throughput.

Baseline Separation of Enantiomers

Lux® Cellulose-1 offers great peak shape at 220 nm

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

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

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

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

7.5 cycles per hr / 787 mg per hr

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

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

**Dimensions:**
- 250 x 21.2 mm
- Flow Rate: 50 mL/min
- Detection: UV @ 220 nm
- Load: 105 mg in 3.5 mL
Supercritical Fluid Chromatography (SFC) Scale-Up (cont’d)
Increase Column ID to Maximize Load

Axia technology offers high performance preparative columns for direct SFC method transfer of analytical separations for increased yields and productivity.

Baseline Separation of Enantiomers

UV-VIS

Polarimeter

Lux Cellulose-1 maintains resolution with increased mass loading

UV-VIS

Polarimeter

Increase yield and throughput while reducing cycle times through stacked injections

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
- Detection: UV @ 254 nm (ambient)
- Polarimeter: ALP-PDR-Chiral
- Sample: Propranolol with ethanol dissolution solvent

UV-VIS

Polarimeter

Dimensions: 250 x 4.6 mm
Flow Rate: 2.5 mL/min
Load: 3 mg in 100 µL

Propranolol

7.5 cycles per hr/ 787 mg per hr

Dimensions: 250 x 21.2 mm
Flow Rate: 50 mL/min
Load: 120 mg in 4 mL
Want to Extend the Lifetime of Your Axia™ Column?

Use the SecurityGuard™ PREP Column Protection System

SecurityGuard PREP:
- Extends prep column lifetime by as much as 5x
- Protects column from samples that precipitate out of solution
- Protects column from contaminants
- Stable and leak-free up to 60 mL/min

The SecurityGuard PREP system was designed to effectively (and inexpensively) protect your valuable prep columns from the damaging effects of mobile phase and sample chemical contaminants and particulates, without altering your chromatographic results.

Forced Degradation Study

Injection 1: Axia Packed Column with SecurityGuard PREP Column Protection System

Conditions
- Column: Luna® 10 µm C18(2) Axia Packed
- Dimension: 50 x 21.2 mm
- Part No.: 00B-4253-P0-AX
- Mobile Phase: A: 0.1% TFA in Water
  B: 0.1% TFA in Water/Acetonitrile (25:75)
- Gradient: Linear 93:7 (A/B) to 100% B over 5 minutes
- Injection Volume: 420 µL
- Flow Rate: 60 mL/min
- Temperature: Ambient
- Detection: UV @ 270 nm
- Sample: 1. Nadolol
  2. Metoprolol
  3. Propranolol

Injection 240: Axia Packed Column with SecurityGuard PREP

Injection 241: Axia Packed Column after Removing SecurityGuard PREP Column Protection System

Forced Degradation Study

Time to change the PREP cartridge

Original column performance maintained by using SecurityGuard PREP
SecurityGuard™ PREP System

Simply match the appropriate SecurityGuard PREP cartridge and cartridge holder to your Axia™ column's chemistry and ID to greatly extend your column’s lifetime.

Cartridges and Holders
Step 1: Choose column ID
Step 2: Match column phase

Ordering Information

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
<th>pH Stability</th>
<th>Material Description</th>
<th>pH Stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cartridges for General Purpose/Pharmaceutical</td>
<td>ea</td>
<td>ea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C18</td>
<td>(ODS, Octadecyl)</td>
<td>1.5 - 10</td>
<td>AJ0-7839</td>
<td>AJ0-8301</td>
</tr>
<tr>
<td>C12</td>
<td>(Dodecyl)</td>
<td>1.5 - 10</td>
<td>AJ0-7842</td>
<td>AJ0-8304</td>
</tr>
<tr>
<td>C8</td>
<td>(MDS, Ocyl)</td>
<td>1.5 - 10</td>
<td>AJ0-7840</td>
<td>AJ0-8302</td>
</tr>
<tr>
<td>Silica</td>
<td></td>
<td></td>
<td>AJ0-7229</td>
<td>AJ0-8312</td>
</tr>
<tr>
<td>Nh</td>
<td>(Amino, Amino-propyl)</td>
<td>1.5 - 11</td>
<td>AJ0-8162</td>
<td>AJ0-8309</td>
</tr>
<tr>
<td>CN</td>
<td>(Cyan, Cyanopropyl)</td>
<td>2 - 7.5</td>
<td>AJ0-8220</td>
<td>AJ0-8311</td>
</tr>
<tr>
<td>Phenyl</td>
<td>(Phenylhexyl)</td>
<td>1.5 - 10</td>
<td>AJ0-7841</td>
<td>AJ0-8303</td>
</tr>
<tr>
<td>PFP2</td>
<td>Pentfluorophenyl</td>
<td>1.5 - 8</td>
<td>AJ0-8377</td>
<td>AJ0-8378</td>
</tr>
<tr>
<td>SCX</td>
<td>(SA, Strong Cation Exchanger)</td>
<td>2.5 - 7.5</td>
<td>AJ0-8595</td>
<td>AJ0-8596</td>
</tr>
<tr>
<td>RP-1</td>
<td>(Reversed Phase - Polymer)</td>
<td>0 - 14</td>
<td>AJ0-8338</td>
<td></td>
</tr>
<tr>
<td>Polar-RP</td>
<td>(Ether-linked Phenyl)</td>
<td>1.5 - 7</td>
<td>AJ0-7845</td>
<td>AJ0-8307</td>
</tr>
<tr>
<td>Fusion-RP</td>
<td>(C18 Polar Embedded)</td>
<td>1.5 - 10</td>
<td>AJ0-7844</td>
<td>AJ0-8306</td>
</tr>
<tr>
<td>AQ C18</td>
<td>(Polar Endcapped C18)</td>
<td>1.5 - 7.5</td>
<td>AJ0-7843</td>
<td>AJ0-8305</td>
</tr>
<tr>
<td>Gemini®-NX</td>
<td>(C18 Twin NX™ Technology)</td>
<td>1 - 12</td>
<td>AJ0-8370</td>
<td>AJ0-8371</td>
</tr>
<tr>
<td>Gemini C18</td>
<td>(C18 TWIN™ Technology)</td>
<td>1 - 12</td>
<td>AJ0-7846</td>
<td>AJ0-8308</td>
</tr>
<tr>
<td>Oligo-RP</td>
<td>(C18 TWIN Technology)</td>
<td>1 - 12</td>
<td>AJ0-8210</td>
<td>AJ0-8310</td>
</tr>
<tr>
<td>Oligo-WAX</td>
<td>(WA, Weak Anion Exchanger)</td>
<td>1.5 - 11</td>
<td>AJ0-8639</td>
<td>AJ0-8420</td>
</tr>
<tr>
<td>Cartridges for Protein and Polypeptide Reversed Phase</td>
<td>ea</td>
<td>ea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For use with silica columns for separation of proteins &amp; peptides, such as Jupiter® (Phenomenex); Vydac® 218TP, 214TP (Alltech Associates, Inc.); Nucleosil® 300 Å C18, C4; HYPERSIL® 300 Å, and other widepore or 300 Å brands.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widepore C18</td>
<td>(ODS, Octadecyl)</td>
<td>1.5 - 10</td>
<td>AJ0-7330</td>
<td>AJ0-8313</td>
</tr>
<tr>
<td>Widepore C4</td>
<td>(Butyl)</td>
<td>1.5 - 10</td>
<td>AJ0-7231</td>
<td>AJ0-8314</td>
</tr>
<tr>
<td>Cartridges for Chiral</td>
<td>ea</td>
<td>ea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For use with chiral columns, such as Lux® Cellulose-1, -2, -3, -4, &amp; Amylose-2 (Phenomenex); CHIRALCEL® OD-H®, CHIRALCEL® OJ-H®&amp; CHIRALPAK® AD®-H (DAICEL Chemical Industries, Ltd.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lux Cellulose-1</td>
<td>Cellulose tris (3, 5-dimethylphenylcarbamate)</td>
<td>2 - 9</td>
<td>AJ0-8405</td>
<td>AJ0-8406</td>
</tr>
<tr>
<td>Lux Cellulose-2</td>
<td>Cellulose tris (3-chloro-4-methylphenylcarbamate)</td>
<td>2 - 9</td>
<td>AJ0-8400</td>
<td>AJ0-8401</td>
</tr>
<tr>
<td>Lux Cellulose-3</td>
<td>Cellulose tris (4-methylbenzolate)</td>
<td>2 - 9</td>
<td>AJ0-8624</td>
<td>AJ0-8625</td>
</tr>
<tr>
<td>Lux Cellulose-4</td>
<td>Cellulose tris (4-chole-3-methylphenylcarbamate)</td>
<td>2 - 9</td>
<td>AJ0-8629</td>
<td>AJ0-8630</td>
</tr>
<tr>
<td>Lux Amylose-2</td>
<td>Amylose tris (5-chloro-2-methylphenylcarbamate)</td>
<td>2 - 9</td>
<td>AJ0-8473</td>
<td>AJ0-8474</td>
</tr>
</tbody>
</table>

Guard Cartridge Holders (one-time purchase only)

Phenomenex | WEB: www.phenomenex.com
**Exceed Your Purification Goals with Axia Packed Columns**

**Ordering Information**

<table>
<thead>
<tr>
<th>Phases</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>50 x 21.2 mm</strong></td>
<td></td>
</tr>
<tr>
<td>Gemini-NX 5 µm C18</td>
<td>00F-4454-P0-AX</td>
</tr>
<tr>
<td>Luna 5 µm C18(2)</td>
<td>00F-4455-P0-AX</td>
</tr>
<tr>
<td>Luna 5 µm C8(2)</td>
<td>00G-4442-P0-AX</td>
</tr>
<tr>
<td>Luna 5 µm CN</td>
<td>00G-4445-P0-AX</td>
</tr>
<tr>
<td>Luna 5 µm Phenyl-Hexyl</td>
<td>00G-4472-P0-AX</td>
</tr>
<tr>
<td>Luna 5 µm HILIC</td>
<td>00G-4450-P0-AX</td>
</tr>
<tr>
<td>Luna 5 µm Silica(2)</td>
<td>00G-4274-P0-AX</td>
</tr>
<tr>
<td>Synergy 4 µm Fusion-RP</td>
<td>00G-4444-P0-AX</td>
</tr>
<tr>
<td>Synergy 4 µm Max-RP</td>
<td>00G-4455-P0-AX</td>
</tr>
<tr>
<td>Synergy 4 µm Hydro-RP</td>
<td>00G-4456-P0-AX</td>
</tr>
<tr>
<td>Synergy 4 µm Polar-RP</td>
<td>00G-4457-P0-AX</td>
</tr>
</tbody>
</table>

| **75 x 21.2 mm** |
| Gemini-NX 5 µm C18 | 00C-4454-P0-AX |
| Luna 5 µm C18(2) | 00C-4455-P0-AX |
| Luna 10 µm C8(2) | 00G-4457-P0-AX |
| Luna 10 µm CN | 00G-4458-P0-AX |
| Luna 10 µm Phenyl-Hexyl | 00G-4487-P0-AX |
| Luna 10 µm HILIC | 00G-4486-P0-AX |
| Luna 10 µm Silica (2) | 00G-4490-P0-AX |
| Lux 5 µm Amylese-2 | 00G-4491-P0-AX |
| Lux 5 µm Cellulose-1 | 00G-4492-P0-AX |
| Lux 5 µm Cellulose-2 | 00G-4493-P0-AX |
| Lux 5 µm Phenyl-Hexyl | 00G-4494-P0-AX |
| Luna 10 µm Silica(2) | 00G-4495-P0-AX |
| Synergy 4 µm Fusion-RP | 00G-4496-P0-AX |
| Synergy 4 µm Max-RP | 00G-4497-P0-AX |
| Synergy 4 µm Hydro-RP | 00G-4498-P0-AX |
| Synergy 4 µm Polar-RP | 00G-4499-P0-AX |

| **100 x 21.2 mm** |
| Clarity 5 µm Oligo-RP | 00C-4442-P0-AX |
| Gemini 5 µm C6-Phenyl | 00C-4444-P0-AX |
| Gemini-NX 5 µm C18 | 00C-4454-P0-AX |
| Gemini-NX 10 µm C18 | 00C-4455-P0-AX |
| Jupiter 10 µm C18 | 00G-4055-P0-AX |
| Jupiter 10 µm C4 | 00G-4168-P0-AX |
| Jupiter 10 µm Proteo | 00G-4397-P0-AX |
| Luna 5 µm C18(2) | 00C-4456-P0-AX |
| Luna 10 µm C8(2) | 00G-4457-P0-AX |
| Luna 10 µm CN | 00G-4458-P0-AX |
| Luna 10 µm NH3 | 00G-4476-P0-AX |
| Luna 5 µm HILIC | 00G-4490-P0-AX |
| Luna 5 µm Silica (2) | 00G-4491-P0-AX |
| Lux 5 µm Amylese-2 | 00G-4492-P0-AX |
| Lux 5 µm Cellulose-1 | 00G-4493-P0-AX |
| Lux 5 µm Cellulose-2 | 00G-4494-P0-AX |
| Lux 5 µm Phenyl-Hexyl | 00G-4495-P0-AX |
| Luna 10 µm Silica(2) | 00G-4496-P0-AX |
| Synergy 4 µm Fusion-RP | 00G-4497-P0-AX |
| Synergy 4 µm Max-RP | 00G-4498-P0-AX |
| Synergy 4 µm Hydro-RP | 00G-4499-P0-AX |
| Synergy 4 µm Polar-RP | 00G-4500-P0-AX |
| Synergy 4 µm Proteo | 00G-4274-P0-AX |
| Luna 10 µm Silica(2) | 00G-4275-P0-AX |
| Lux 5 µm HILIC | 00G-4276-P0-AX |
| Luna 5 µm CN | 00G-4277-P0-AX |
| Luna 5 µm NH3 | 00G-4278-P0-AX |
| Luna 5 µm Silica (2) | 00G-4279-P0-AX |
| Luna 5 µm C8(2) | 00G-4280-P0-AX |
| Luna 10 µm C8(2) | 00G-4281-P0-AX |
| Luna 5 µm CN | 00G-4282-P0-AX |
| Luna 5 µm Phenyl-Hexyl | 00G-4283-P0-AX |
| Luna 5 µm HILIC | 00G-4284-P0-AX |
| Luna 5 µm Silica (2) | 00G-4285-P0-AX |
| Luna 5 µm Amylese-2 | 00G-4286-P0-AX |
| Luna 5 µm Cellulose-1 | 00G-4287-P0-AX |
| Luna 5 µm Cellulose-2 | 00G-4288-P0-AX |
| Luna 5 µm Phenyl-Hexyl | 00G-4289-P0-AX |
| Luna 5 µm HILIC | 00G-4290-P0-AX |
| Luna 5 µm Silica (2) | 00G-4291-P0-AX |

**SecurityGuard™ PREP System**

*Highly recommended for extending column lifetime*

Protect your Axia Packed column and prolong its lifetime with SecurityGuard PREP, the advanced HPLC guard cartridge system.

- Get full protection with minimal impact on your chromatographic results.
- Contaminants are retained by an inexpensive, 15 x 21.2 or 15 x 30 mm ID disposable cartridge. See page 9 for cartridge part numbers.

**Ordering Information**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJO-8223</td>
<td>SecurityGuard PREP HPLC Guard Cartridge Holder Kit, 21.2 mm ID, includes column coupler</td>
</tr>
<tr>
<td>AJO-8277</td>
<td>SecurityGuard PREP HPLC Guard Cartridge Holder Kit, 30.0 mm ID, includes column coupler</td>
</tr>
</tbody>
</table>

* Holder requires cartridge specific to your column phase.
### Ordering Information

<table>
<thead>
<tr>
<th>Phases</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>50 x 30 mm</strong></td>
<td></td>
</tr>
<tr>
<td>Gemini-NX 5 µm C18</td>
<td>00B-4454-U0-AX</td>
</tr>
<tr>
<td>Gemini-NX 10 µm C18</td>
<td>00B-4455-U0-AX</td>
</tr>
<tr>
<td>Luna 5 µm C18(2)</td>
<td>00B-4252-U0-AX</td>
</tr>
<tr>
<td>Luna 10 µm C18(2)</td>
<td>00B-4253-U0-AX</td>
</tr>
<tr>
<td>Luna 5 µm C8(2)</td>
<td>00B-4249-U0-AX</td>
</tr>
<tr>
<td>Luna 10 µm C8(2)</td>
<td>00B-4250-U0-AX</td>
</tr>
<tr>
<td>Luna 5 µm Phenyl-Hexyl</td>
<td>00B-4257-U0-AX</td>
</tr>
<tr>
<td>Luna 5 µm PFP(2)</td>
<td>00B-4448-U0-AX</td>
</tr>
<tr>
<td>Luna 5 µm Silica(2)</td>
<td>00B-4274-U0-AX</td>
</tr>
<tr>
<td>Synergi 4 µm Max-RP</td>
<td>00B-4337-U0-AX</td>
</tr>
<tr>
<td>Synergi 10 µm Max-RP</td>
<td>00B-4350-U0-AX</td>
</tr>
<tr>
<td>Synergi 4 µm Hydro-RP</td>
<td>00B-4375-U0-AX</td>
</tr>
<tr>
<td>Synergi 10 µm Hydro-RP</td>
<td>00B-4376-U0-AX</td>
</tr>
<tr>
<td>Synergi 4 µm Polar-RP</td>
<td>00B-4336-U0-AX</td>
</tr>
<tr>
<td>Synergi 10 µm Polar-RP</td>
<td>00B-4351-U0-AX</td>
</tr>
<tr>
<td><strong>250 x 50 mm</strong></td>
<td></td>
</tr>
<tr>
<td>Gemini 5 µm C6-Phenyl</td>
<td>00D-4444-U0-AX</td>
</tr>
<tr>
<td>Gemini-NX 5 µm C18</td>
<td>00D-4454-U0-AX</td>
</tr>
<tr>
<td>Luna 5 µm C18(2)</td>
<td>00D-4252-U0-AX</td>
</tr>
<tr>
<td>Luna 10 µm C18(2)</td>
<td>00D-4253-U0-AX</td>
</tr>
<tr>
<td>Luna 5 µm C8(2)</td>
<td>00D-4249-U0-AX</td>
</tr>
<tr>
<td>Luna 10 µm C8(2)</td>
<td>00D-4250-U0-AX</td>
</tr>
<tr>
<td>Synergi 10 µm Max-RP</td>
<td>00D-4350-U0-AX</td>
</tr>
<tr>
<td>Synergi 4 µm Max-RP</td>
<td>00D-4357-U0-AX</td>
</tr>
<tr>
<td>Synergi 4 µm Hydro-RP</td>
<td>00D-4375-U0-AX</td>
</tr>
<tr>
<td>Synergi 4 µm Polar-RP</td>
<td>00D-4336-U0-AX</td>
</tr>
</tbody>
</table>

### Trademarks

Luna, Jupiter, Clarity, and Gemini are registered trademarks of Phenomenex, Inc. Axia, Synergi, pH-LC, TWIN, TWIN-NX, and SecurityGuard are trademarks of Phenomenex, Inc. Lux is a registered trademark of Phenomenex in the U.S., E.U., and other jurisdictions.

Axia is patented by Phenomenex. U.S. Patent No. 7,674,383

SecurityGuard is patented by Phenomenex. U.S. Patent No. 5,863,428

Gemini is patented by Phenomenex. U.S. Patent No. 7,563,367

© 2011 Phenomenex, Inc. All rights reserved.

---

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.