



aapptec

advanced automated
peptide protein technologies

Spirit of Innovation



[Peptide
columns



[Protein
columns



[Organic
columns

Spirit™
HPLC Columns

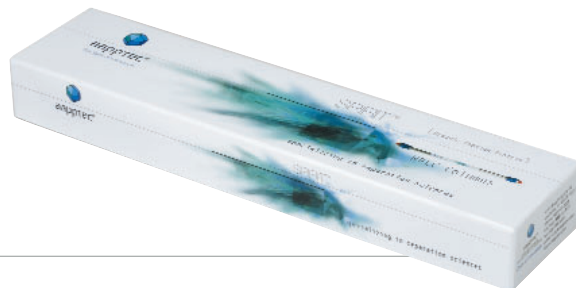


Specializing in Separation Sciences



aapptec

Spirit™



Spirit™ HPLC Columns for peptides, proteins and organic compounds provide performance that is unsurpassed in efficiency, reliability and reproducibility. Manufactured using novel proprietary technologies, analytical and preparative Spirit™ columns are simply the best reverse phase columns available today. Spirit™ columns ensure greater separation efficiency, resistance to extreme pH conditions and longer column life. Our **“Ultra-Fast”** columns are made in 3-5cm length in order to get quick analytical results, whereas the **“High Efficiency”** columns are normally in 15-25cm lengths to obtain best resolution. The **“Microbore”**

columns are particularly designed for LC/MS applications. The high detection sensitivity of these columns allows for the use of smaller quantities of samples and also decreases the required volume of solvents.

Our **ORGANIC, PEPTIDE, and PROTEIN** Columns are all uniquely designed with optimized pore size distribution; i.e., 100Å for **ORGANIC**, 120Å for **PEPTIDE** and 300Å for the **PROTEIN** Columns. All aapptec columns work with 0-100% organic, as well as aqueous mobile phases, without any limitations. Just select a column designated for your type of sample to achieve superior results.

Spirit Peptide Columns



Spirit Peptide C18-Columns are designed and manufactured for identification and purification of small peptides with the following specifications:

- High loading capacity of crude peptides
- Stable under basic and extreme acidic conditions
- Porous Size: 120Å
- Packed with 5µm sized particle silica with the following properties: * ultra pure *totally spherical
*narrow distribution range *high density
*proprietary fully end-capped silica

- Microbore Columns are available in: 0.21, 0.30, 0.40 and 0.46cm I.D.
- Analytical Columns are available in: 0.40 and 0.46cm I.D.
- Semi-Prep Columns are available in: 0.78-1.0cm I.D.
- Prep Columns are available in: 2.1cm and larger diameter (request)

C18 Analytical Peptide Columns, 5µm

| Item | 4.6mm I.D. Length (cm) |
|---------|------------------------|
| A010116 | 3 |
| A010117 | 4 |
| A010118 | 5 |
| A010119 | 10 |
| A010120 | 15 |
| A010121 | 20 |
| A010122 | 25 |

| Item | 4.0mm I.D. Length (cm) |
|---------|------------------------|
| A010123 | 3 |
| A010124 | 4 |
| A010125 | 5 |
| A010126 | 10 |
| A010127 | 15 |
| A010128 | 20 |
| A010129 | 25 |

C18 Microbore Peptide Columns, 5µm

| Item | 3.0mm I.D. Length (cm) |
|---------|------------------------|
| A010135 | 3 |
| A010136 | 5 |
| A010137 | 10 |
| A010138 | 15 |
| A010139 | 20 |
| A010140 | 25 |

| Item | 2.1mm I.D. Length (cm) |
|---------|------------------------|
| A010130 | 3 |
| A010131 | 5 |
| A010132 | 10 |
| A010133 | 15 |
| A010134 | 20 |

C18 Semi-Prep Peptide Columns, 5µm

| Item | 10.0mm I.D. Length (cm) |
|---------|-------------------------|
| A010144 | 10 |
| A010145 | 15 |
| A010146 | 25 |

| Item | 7.8mm I.D. Length (cm) |
|---------|------------------------|
| A010141 | 10 |
| A010142 | 15 |
| A010143 | 25 |

C18 Prep Peptide Columns, 5µm

| Item | 21.2mm I.D. Length (cm) |
|---------|-------------------------|
| A010147 | 5 |
| A010148 | 10 |
| A010149 | 15 |
| A010150 | 25 |



Spirit Protein Columns



Spirit Protein Columns are designed and manufactured for identification and purification of proteins and for compounds with high molecular weight. Specifications of these columns are:

- High loading capacity of crude proteins
- Stable, featuring extended acidic and basic conditions
- Packed with 5µm sized particle silica with the following properties: *ultra pure *totally spherical *narrow distribution range *high density *proprietary fully end-capped silica
- Porous Size: 300Å

- Available as C4, C8, and C18 columns
- Microbore Columns are available in: 0.21, 0.30, 0.40 and 0.46cm I.D.
- Analytical Columns are available in: 0.40 and 0.46cm I.D.
- Semi-Prep Columns are available in: 0.78-1.0cm I.D.
- Prep Columns are available in: 2.1cm and larger diameter (request)

C4 Analytical Protein Columns, 5µm

| 4.6mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010081 | 3 |
| A010082 | 4 |
| A010083 | 5 |
| A010084 | 10 |
| A010085 | 15 |
| A010086 | 20 |
| A010087 | 25 |

| 4.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010088 | 3 |
| A010089 | 4 |
| A010090 | 5 |
| A010091 | 10 |
| A010092 | 15 |
| A010093 | 20 |
| A010094 | 25 |

C4 Microbore Protein Columns, 5µm

| 3.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010100 | 3 |
| A010101 | 5 |
| A010102 | 10 |
| A010103 | 15 |
| A010104 | 20 |
| A010105 | 25 |

| 2.1mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010095 | 3 |
| A010096 | 5 |
| A010097 | 10 |
| A010098 | 15 |
| A010099 | 20 |

C4 Semi-Prep Protein Columns, 5µm

| 10.0mm I.D. | |
|-------------|-------------|
| Item | Length (cm) |
| A010109 | 10 |
| A010110 | 15 |
| A010111 | 25 |

| 7.8mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010106 | 10 |
| A010107 | 15 |
| A010108 | 25 |

C4 Prep Protein Columns, 5µm

| 21.2.0mm I.D. | |
|---------------|-------------|
| Item | Length (cm) |
| A010112 | 5 |
| A010113 | 10 |
| A010114 | 15 |
| A010115 | 25 |



– continued next page

- For additional column dimensions or packing material, please contact us.
- For extensive syringe filters, contact us for a copy of our Spirit Syringe Filter Brochure.

Spirit Protein Columns – continued

C8 Analytical Protein Columns, 5µm

| 4.6mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010151 | 3 |
| A010152 | 4 |
| A010153 | 5 |
| A010154 | 10 |
| A010155 | 15 |
| A010156 | 20 |
| A010157 | 25 |

| 4.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010165 | 3 |
| A010166 | 4 |
| A010167 | 5 |
| A010168 | 10 |
| A010169 | 15 |
| A010170 | 20 |
| A010171 | 25 |

C8 Microbore Protein Columns, 5µm

| 3.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010189 | 3 |
| A010190 | 5 |
| A010191 | 10 |
| A010192 | 15 |
| A010193 | 20 |
| A010194 | 25 |

| 2.1mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010179 | 3 |
| A010180 | 5 |
| A010181 | 10 |
| A010182 | 15 |
| A010183 | 20 |

C8 Semi-Prep Protein Columns, 5µm

| 10.0mm I.D. | |
|-------------|-------------|
| Item | Length (cm) |
| A010204 | 10 |
| A010205 | 15 |
| A010206 | 25 |

| 7.8mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010201 | 10 |
| A010202 | 15 |
| A010203 | 25 |

C8 Prep Protein Columns, 5µm

| 21.2.0mm I.D. | |
|---------------|-------------|
| Item | Length (cm) |
| A010207 | 5 |
| A010208 | 10 |
| A010209 | 15 |
| A010210 | 25 |

C18 Analytical Protein Columns, 5µm

| 4.6mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010158 | 3 |
| A010159 | 4 |
| A010160 | 5 |
| A010161 | 10 |
| A010162 | 15 |
| A010163 | 20 |
| A010164 | 25 |

| 4.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010172 | 3 |
| A010173 | 4 |
| A010174 | 5 |
| A010175 | 10 |
| A010176 | 15 |
| A010177 | 20 |
| A010178 | 25 |

C18 Microbore Protein Columns, 5µm

| 3.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010195 | 3 |
| A010196 | 5 |
| A010197 | 10 |
| A010198 | 15 |
| A010199 | 20 |
| A010200 | 25 |

| 2.1mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010184 | 3 |
| AA010185 | 5 |
| A010186 | 10 |
| A010187 | 15 |
| A010188 | 20 |

C18 Semi-Prep Protein Columns, 5µm



| 10.0mm I.D. | |
|-------------|-------------|
| Item | Length (cm) |
| A010214 | 10 |
| A010215 | 15 |
| A010216 | 25 |

| 7.8mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010211 | 10 |
| A010212 | 15 |
| A010213 | 25 |

C18 Prep Protein Columns, 5µm

| 21.2mm I.D. | |
|-------------|-------------|
| Item | Length (cm) |
| A010217 | 5 |
| A010218 | 10 |
| A010219 | 15 |
| A010220 | 25 |



-  For additional column dimensions or packing material, please contact us.
-  For extensive syringe filters, contact us for a copy of our Spirit Syringe Filter Brochure.

Spirit Organic Columns



Spirit Organic C18-Columns are designed and manufactured for identification and purification of organic compounds. Specifications of these columns are:

- Works in 0-100% organic to aqueous phase
- Stable in a wide PH-range 1-12 with inertness and pH-robustness without peak tailing
- Porous Size: 100Å
- Very low metallic impurities
- Ideal to work with LC/MS
- Analyze acidic or basic compounds without peak tailing

- Available in 3 and 5µm silica that gives the following results:
*high performance *high efficiency *reproducibility *reliability
- Microbore Columns are available in:
0.21, 0.30, 0.40 and 0.46cm I.D.
- Analytical Columns are available in:
0.40 and 0.46cm I.D.
- Semi-Prep Columns are available in:
0.78-1.0cm I.D.
- Prep Columns are available in:
2.1cm and larger diameter (request)

C18 Analytical Organic Columns, 5µm

| 4.6mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010000 | 3 |
| A010001 | 4 |
| A010002 | 5 |
| A010003 | 10 |
| A010004 | 15 |
| A010005 | 20 |
| A010006 | 25 |

| 4.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010007 | 3 |
| A010008 | 4 |
| A010009 | 5 |
| A010010 | 10 |
| A010011 | 15 |
| A010012 | 20 |
| A010013 | 25 |

| 3.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010019 | 3 |
| A010020 | 5 |
| A010021 | 10 |
| A010022 | 15 |
| A010023 | 20 |
| A010024 | 25 |

| 2.1mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010014 | 3 |
| A010015 | 5 |
| A010016 | 10 |
| A010017 | 15 |
| A010018 | 20 |

C18 Microbore Organic Columns, 5µm

C18 Semi-Prep Organic Columns, 5µm

| 10.0mm I.D. | |
|-------------|-------------|
| Item | Length (cm) |
| A010028 | 10 |
| A010029 | 15 |
| A010030 | 25 |

| 7.8mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010025 | 10 |
| A010026 | 15 |
| A010027 | 25 |

C18 Prep Organic Columns, 5µm

| 21.2mm I.D. | |
|-------------|-------------|
| Item | Length (cm) |
| A010031 | 5 |
| A010032 | 10 |
| A010033 | 15 |
| A010034 | 25 |



C18 Ultra-Fast Columns, 3µm

| 4.6mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010039 | 3 |
| A010040 | 4 |
| A010041 | 5 |
| A010042 | 10 |

| 4.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010046 | 3 |
| A010047 | 4 |
| A010048 | 5 |
| A010049 | 10 |

C18 High Efficiency Columns, 3µm

| 4.6mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010043 | 15 |
| A010044 | 20 |
| A010045 | 25 |

| 4.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010050 | 15 |
| A010051 | 20 |
| A010052 | 25 |

C18 Ultra-Fast Microbore Columns, 3µm

| 3.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010058 | 3 |
| A010059 | 5 |
| A010060 | 10 |

| 2.1mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010053 | 3 |
| A010054 | 5 |
| A010055 | 10 |

C18 Ultra-Fast High Efficient Columns, 3µm

| 3.0mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010061 | 15 |
| A010062 | 20 |

| 2.1mm I.D. | |
|------------|-------------|
| Item | Length (cm) |
| A010056 | 15 |
| A010057 | 20 |

Spirit Column and Packing Material Options

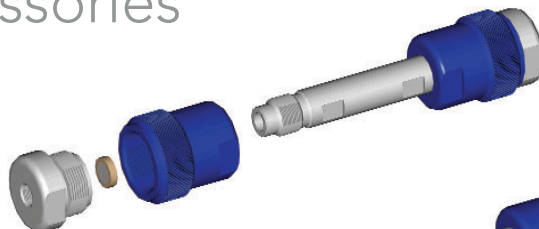
Spirit analytical, semi-preparative and preparative columns and other commercially available columns can be packed with the following materials: Spirit™, Excel, Excel ODS-B, Extrasil, Kromasil, Lichrosorb, Nucleosil etc.

Please contact us for
Catalog Number and Price

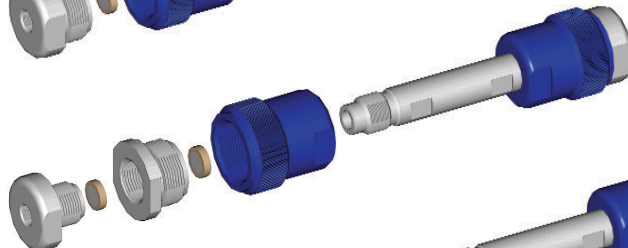


Spirit Accessories

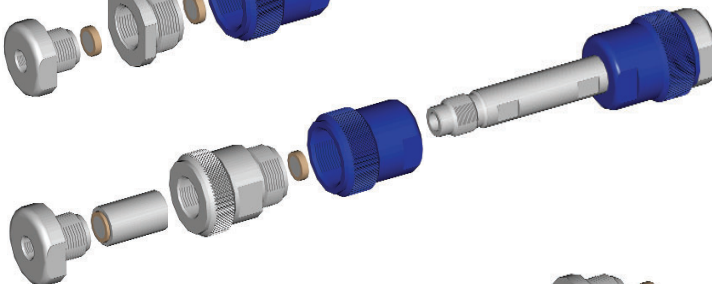
Ultrafit™



Ultrafit™ + Ultrafilter™



Ultrafit™ + Ultraguard™



Ultrafilter™, Ultrafit prefilter adaptor **A-010067**

Ultraguard™, Ultrafit Guard column adaptor **A-010068**

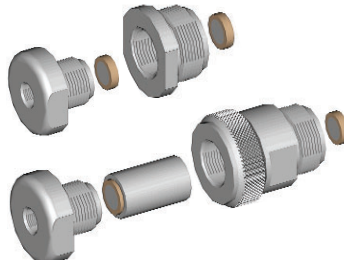
Frits of 0.5µm pore (10 per pack) **A-010069**

Frits of 2.0µm pore (10 per pack) **A-010070**

Ultraguard™ SPIRIT Protein 10 x 3.2mm (5 per pack) **A-010071**

Ultraguard™ SPIRIT Peptide 10 x 3.2mm (5 per pack) **A-010073**

Ultraguard™ SPIRIT Organic 10 x 3.2mm (5 per pack) **A-010074**



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