



HICHROM

Chromatography Columns and Supplies

LC COLUMNS
Perkin Elmer Brownlee

Catalogue 9

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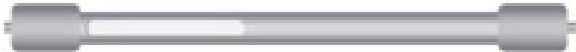


Brownlee™ MPLC Cartridge Columns

Perkin Elmer's Brownlee™ MPLC cartridge columns provide a range of options for HPLC. They are available in three lengths (3, 10 and 22cm) and two internal diameters (4.6 and 2.1mm). A specific cartridge holder (3, 10 or 22cm) is required for each cartridge length. The MPLC cartridge system allows direct coupling of an analytical and NewGuard cartridge without introduction of any dead volume (available for 10cm and 22cm cartridge column lengths). Changing cartridges is easy with the fingertight cartridge design which does not require any wrench-tightening of the holder or disconnecting of tubing from the LC system.

Brownlee Spheri- and Aquapore Phases

| Phase | Functional Group | Particle Size (µm) | Pore Size (Å) | Surface Area (m ² /g) | Carbon Load (%) | Endcapped |
|------------------------|---------------------|--------------------|---------------|----------------------------------|-----------------|-----------|
| Spheri-RP-8 | C8, monofunctional | 5, 10 | 80 | 180 | 6 | Yes |
| Spheri-RP-18 | C18, monofunctional | 5, 10 | 80 | 180 | 11 | Yes |
| Spheri-ODS | C18, polyfunctional | 5 | 80 | 180 | 14 | Yes |
| Aquapore Butyl, BU-300 | C4 | 7 | 300 | 100 | 3 | Yes |
| Aquapore Octyl, RP-300 | C8 | 7 | 300 | 100 | 5 | Yes |
| Aquapore ODS, OD-300 | C18 | 7 | 300 | 100 | 10 | Yes |

MPLC Cartridge Hardware

| Description | Part Number |
|--|-------------|
| 3cm cartridge holder  | 0715-0013 |
| 10cm cartridge holder  | 0715-0014 |
| 22cm cartridge holder  | 0715-0015 |
| 10cm cartridge holder incorporating NewGuard system  | 0715-0016 |
| 22cm cartridge holder incorporating NewGuard system  | 0715-0017 |

Ordering Information – Brownlee Spheri- and Aquapore Phases

| Brownlee Phase | Cartridge Dimensions ¹ (mm) | | | | | | NewGuard Cartridge ³ 15 x 3.2mm (3/pk) |
|--|--|-----------------------|-------------------|-------------------|-------------------|-------------------|--|
| | 30 x 2.1 ² | 30 x 4.6 ² | 100 x 2.1 | 100 x 4.6 | 220 x 2.1 | 220 x 4.6 | |
| Spheri-5, RP-8 | - | 0711-0001 £136 | 0711-0004 £261 | 0711-0003 £313 | 0711-0006 £345 | 0711-0005 £471 | - |
| Spheri-5, RP-18 | 0711-0014 £147 | 0711-0013 £147 | 0711-0016 £240 | 0711-0015 £213 | 0711-0018 £261 | 0711-0017 £471 | - |
| Spheri-5, ODS | 0711-0020 £104 | 0711-0019 £136 | 0711-0022 £208 | 0711-0021 £313 | 0711-0024 £366 | 0711-0023 £450 | - |
| Spheri-10, RP-8 | - | 0711-0121 £128 | - | 0711-0123 £208 | - | - | - |
| Spheri-10, RP-18 | - | 0711-0115 £136 | - | 0711-0117 £366 | - | 0711-0119 £345 | - |
| Aquapore Butyl, BU-300 | 0711-0062 £136 | 0711-0061 £157 | 0711-0064 £313 | - | - | - | 0711-0088 £104 |
| Aquapore Octyl, RP-300 | 0711-0056 £187 | 0711-0055 £157 | 0711-0058 £240 | 0711-0057 £313 | 0711-0060 £345 | 0711-0059 £522 | 0711-0090 £104 |
| Aquapore ODS, OD-300 | 0711-0234 £136 | 0711-0235 £136 | 0711-0233 £261 | 0711-0232 £240 | 0711-0236 £313 | 0711-0231 £313 | 0711-0092 £104 |
| Cartridge holder hardware alone | 0715-0013 £165 | 0715-0013 £165 | 0715-0014 £165 | 0715-0014 £165 | 0715-0015 £164 | 0715-0015 £164 | - |
| Cartridge holder hardware incorporating integral NewGuard system | - | - | 0715-0016 £278 | 0715-0016 £278 | 0715-0017 £302 | 0715-0017 £302 | - |

¹ Use with appropriate length cartridge holder 0715-0013/0014/0015

² 2/pk

³ Use with appropriate length integral cartridge holder 0715-0016/0017

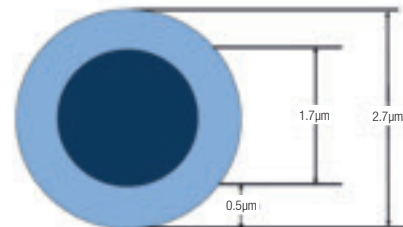
Brownlee™ SPP

- Superficially porous 2.7µm particles
- 'UHPLC-like' separations on standard HPLC systems
- Ultra fast performance and efficiency using UHPLC systems
- Faster method development
- Maximum pressure 9,000psi

Brownlee™ Superficially Porous Particle (SPP) columns use 2.7µm particles comprised of a thin outer shell of porous silica fused to a solid inner core. This allows for a shorter diffusion path compared to 3µm fully porous particles, which reduces the time solute molecules spend inside the particles while passing through the stationary phase. This, in turn, keeps back pressure to a minimum and improves column efficiency.

Brownlee SPP columns allow for higher sample throughput whilst maintaining high resolution. A 50% improvement in efficiency may be achieved using a conventional HPLC system with no instrument modification.

The particles in Brownlee SPP columns have an extremely narrow size distribution range, enabling them to be more easily and robustly packed into the column. This results in columns that are extremely rugged, reproducible and reliable.



Brownlee SPP Phases

| Phase | Pore Size (Å) | Endcapped | pH Range | Temperature Limit (°C) | Applications |
|----------------|---------------|-----------|----------|------------------------|---|
| C18 | 90 | Yes | 2 - 9 | 60 | General purpose C18 |
| C8 | 90 | Yes | 2 - 9 | 60 | General purpose C8 |
| HILIC | 90 | No | 2 - 9 | 60 | General purpose unbonded silica for NP and HILIC applications |
| Peptide ES-C18 | 160 | No | 1 - 8 | 90 | Sterically protected ligand results in Extra Stable bonded phase at low pH where most peptide separations are performed |
| PFP | 90 | Yes | 2 - 8 | 60 | High retentivity and selectivity for protonated basic analytes and molecules containing aromatic moieties |
| Phenyl-Hexyl | 90 | Yes | 2 - 9 | 60 | Alternative selectivity to alkyl bonded phases, recommended for aromatic groups. Compatible with highly aqueous eluents |
| RP-Amide | 90 | Yes | 2 - 9 | 60 | Shows significantly increased retention and selectivity of acids. Excellent peak shape for bases, zwitterions and other polar compounds |

Ordering Information - Brownlee SPP Phases

| Brownlee SPP Phase | Column Dimensions ¹ (mm) | | | | Guard Cartridges ² (3/pk) (5 x 2.1mm) |
|--------------------|-------------------------------------|----------|-----------|-----------|---|
| | 20 x 2.1 | 50 x 2.1 | 100 x 2.1 | 150 x 2.1 | |
| | £401 | £504 | £580 | £669 | £419 |
| C18 | N9308400 | N9308402 | N9308404 | N9308405 | N9308513 |
| C8 | N9308418 | N9308420 | N9308422 | N9308423 | N9308522 |
| HILIC | - | N9308436 | N9308438 | N9308439 | N9308525 |
| Peptide ES-C18 | - | N9308451 | N9308453 | N9308454 | N9308528 |
| PFP | N9308465 | N9308467 | N9308469 | N9308470 | N9308531 |
| Phenyl-Hexyl | N9308481 | N9308483 | N9308485 | N9308486 | N9308519 |
| | £442 | £544 | £620 | £710 | £419 |
| RP-Amide | N9308497 | N9308499 | N9308501 | N9308502 | N9308516 |

| Brownlee SPP Phase | Column Dimensions ¹ (mm) | | | | Guard Cartridges ² (3/pk) (5 x 4.6mm) |
|--------------------|-------------------------------------|----------|-----------|-----------|---|
| | 20 x 4.6 | 50 x 4.6 | 100 x 4.6 | 150 x 4.6 | |
| | £401 | £504 | £580 | £669 | £419 |
| C18 | N9308412 | N9308414 | N9308416 | N9308417 | N9308515 |
| C8 | N9308429 | N9308431 | N9308433 | N9308434 | N9308524 |
| HILIC | - | N9308446 | N9308448 | N9308449 | N9308527 |
| Peptide ES-C18 | - | N9308461 | N9308463 | N9308464 | N9308530 |
| PFP | - | N9308477 | N9308479 | N9308480 | N9308533 |
| Phenyl-Hexyl | - | N9308493 | N9308495 | N9308496 | N9308521 |
| | - | £544 | £620 | £710 | £419 |
| RP-Amide | - | N9308509 | N9308511 | N9308512 | N9308518 |

¹ Other column dimensions available

² Use with guard cartridge holder N9308534 (€321)