

The Alltima HPLC column range was developed by Alltech. Hichrom acquired the entire range from Grace. Alltima phases are acid and base-deactivated, giving excellent peak shape for acids, bases, and neutrals in a single run. Polymerically bonded and double-encapped for long column lifetimes, Alltima columns are great general purpose "workhorse" columns.

Key Features

- Base deactivated silica
- Stable bonding for long column lifetime
- Symmetrical peak shape

Alltima Phase Specifications

| Phase | Particle size / μm | Endcapped? | Properties | Applications | USP Code |
|--------|-------------------------------|------------|-----------------------------------------------------------------|-----------------------------------------------------------------------|----------|
| C18 | 3, 5, 10 | Yes | Classic reversed-phase retention and selectivity | High quality hydrophobic general purpose C18 | L1 |
| C18-LL | 5 | Yes | Lower carbon load than traditional Alltima C18 | Reversed-phase applications that require a less hydrophobic C18 phase | L1 |
| C8 | 3, 5 | Yes | Lower retention compared to C18 phases | Reversed-phase applications where C18 is too retentive | L7 |
| Amino | 3, 5 | No | General purpose amino suitable for normal or reversed-phase use | Use for carbohydrate analysis or as a weak anion exchanger | L8 |
| Cyano | 3, 5 | Yes | General purpose cyano suitable for normal or reversed-phase use | Rugged normal-phase applications | L10 |
| Phenyl | 3, 5 | Yes | Less hydrophobic than C18 phase | Selective to aromatic compounds | L11 |
| Silica | 3, 5, 10 | - | Highly polar phase | General purpose normal phase applications | L3 |

Ordering Information

Analytical Columns

3 μm

| Length / mm | 20 | | 50 | | 100 | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| | 2.1 | 4.6 | 2.1 | 4.6 | 1.0 | 2.1 | 4.6 |
| C18 | 43803 | 43851 | 88353 | 81412 | 43853 | 88352 | 81382 |
| C8 | - | - | - | 81413 | - | - | 81392 |
| Amino | - | - | - | 81180 | - | - | 81183 |
| Cyano | - | - | - | 81179 | - | - | 81182 |
| Phenyl | - | - | - | 81178 | - | - | 81181 |
| Silica | - | - | - | 81414 | - | - | 81404 |

| Length / mm | 150 | | | 250 | Guard cartridges (3/pk) ¹ |
|-------------|---------------------------|-------|-------|---------------|--------------------------------------|
| | 2.1 | 3.0 | 4.6 | 4.6 | For 2.1 |
| C18 | 43852 | 81143 | 81387 | AL-3C18-25046 | 96681/N |
| C8 | - | - | 81397 | - | - |
| Amino | AL-3NH-150DK ² | - | 81190 | - | - |
| Cyano | - | - | 81189 | - | - |
| Phenyl | 43813 | - | 81188 | - | - |
| Silica | 43884 | - | 81409 | - | - |

¹To be used with All-Guard cartridge holder (80101/N) and column coupler for All-Guard cartridges (HI-081). ²Actual dimensions: 150 x 2.0 mm

3 μm – Columns Compatible with Waters Instruments

| Length / mm | 100 | 150 |
|-------------|-------|-------|
| C18 | 81383 | 81388 |
| C8 | 81393 | 81398 |
| Silica | 81405 | 81410 |

3 μm – Rocket Columns

Rocket columns are specifically designed for high-throughput and high-speed methods.

| Length / mm | 33 | 53 |
|-------------|-------|-------|
| C18 | 50603 | 50605 |
| C8 | - | 50609 |
| Phenyl | - | 43867 |
| Silica | - | 43877 |

Column: Alltima C8, 5 μm , 150 x 4.6 mm (p/n 88072)

Dimensions: 150 x 4.6 mm

Mobile phase: A: 0.05 M K_2HPO_4 , pH 3.3

B: Methanol

C: Acetonitrile

| Time / min | 0 | 2 | 5 |
|------------|----|----|----|
| % A | 80 | 80 | 45 |
| % B | 10 | 10 | 30 |
| % C | 10 | 10 | 25 |

Flow rate: 2.0 mL min⁻¹

Detector: UV at 280 nm

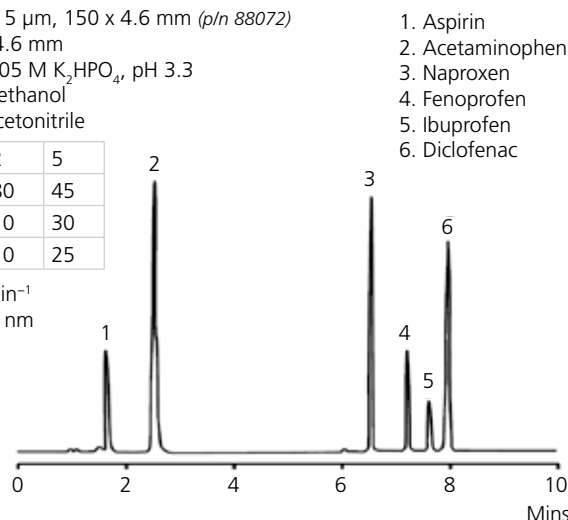


Figure 1. Analgesics

5 µm

| Length / mm | 50 | | 100 | | 125 | 150 | | |
|-------------|-------|-------|--------------|-------|---------------|-------|-------|--------------------|
| i.d. / mm | 2.1 | 4.6 | 3.0 | 4.6 | 4.0 | 2.1 | 3.0 | 4.6 |
| C18 | 88888 | 88889 | – | 88059 | AL-5C18-125DF | 88370 | 81140 | 88052 ¹ |
| C18-LL | – | – | – | – | – | 88388 | – | 88069 |
| C8 | – | – | AL-5C8-100DT | – | – | 88372 | 81146 | 88072 |
| Amino | – | – | – | – | – | – | – | 88205 |
| Cyano | – | – | – | 88065 | – | – | – | 88180 |
| Phenyl | – | – | – | – | – | – | 81147 | 88087 |
| Silica | – | – | – | – | – | – | – | 88123 |

¹Also available in PEEK metal-free hardware (88051).

| Length / mm | 250 | | | | 300 | | | Guard cartridges (3/pk) ¹ | |
|-------------|-------|-------|---------------|--------------------|---------------|---------------|--------------|--------------------------------------|----------------------|
| i.d. / mm | 2.1 | 3.0 | 4.0 | 4.6 | 3.9 | 4.0 | 4.6 | For 2.1 | For 3.0–4.6 |
| C18 | 88371 | 81142 | AL-5C18-250DF | 88056 ² | AL-5C18-300DE | AL-5C18-300DF | AL-5C18-300D | 96680/N ³ | 96361/N ⁴ |
| C18-LL | 88389 | – | – | 88099 | – | – | – | 96432/N | 96285/N |
| C8 | – | – | – | 88076 | – | – | – | 96441/N | 96362/N |
| Amino | – | – | AL-5NH-250DF | 88217 ⁵ | – | – | – | – | 96085/N |
| Cyano | – | – | – | 88189 | – | – | – | – | 96084/N |
| Phenyl | – | – | – | 88092 | AL-5PH-300DE | – | – | 96442/N | 96082/N |
| Silica | – | – | AL-5-250DF | 88171 | – | AL-5-300DF | – | 96450/N | 96083/N |

¹To be used with All-Guard cartridge holder (80101/N) and column coupler for All-Guard cartridges (HI-081). ²Also available in PEEK metal-free hardware (88055).

³Also available with 10/pk (5174010/N). ⁴Also available with 10/pk (96080SP/N). ⁵Also available with reversed-phase solvent (88217RP).

5 µm – Columns Compatible with Waters Instruments

| Length / mm | 150 | 250 | Guard cartridges (3/pk) ¹ |
|-------------|-------|-------|--------------------------------------|
| i.d. / mm | 4.6 | 4.6 | For 3.0-4.6 |
| C18 | 88053 | 88057 | 96361/N |
| C8 | 88073 | 88077 | 96362/N |
| Amino | – | 88218 | 96085/N |
| Cyano | 88182 | 88191 | 96084/N |
| Phenyl | 88088 | 88093 | 96082/N |
| Silica | – | 88172 | 96083/N |

¹To be used with All-Guard cartridge holder (80101/N) and column coupler for All-Guard cartridges (Waters type column port: HI-881).

10 µm

| Length / mm | 150 | 250 | 300 | |
|-------------|-------|-------|----------------|----------------|
| i.d. / mm | 4.6 | 4.6 | 3.9 | 4.0 |
| C18 | 88302 | 88307 | AL-10C18-300DE | AL-10C18-300DF |
| Silica | – | 88327 | AL-10-300DE | – |

88308 – Alltima C18, 10 µm, 250 x 4.6 mm (compatible with Waters instruments)

Method Validation Kits

Alltima C18 method validation kits containing 3 columns from 3 different silica batches are available for you to evaluate the robustness of your method to ensure reproducibility run after run.

11350 – Alltima C18, 3 µm, 100 x 4.6 mm

11541 – Alltima C18, 5 µm, 150 x 4.6 mm

11543 – Alltima C18, 5 µm, 250 x 4.6 mm

Semi-preparative and Preparative Columns

5 µm

| Length / mm | 150 | | 250 | | Guard cartridges (3/pk) ¹ |
|-------------|-------|-------|-------|-------|--------------------------------------|
| i.d. / mm | 10 | 22 | 10 | 22 | For 10–22 |
| C18 | 81102 | 81106 | 88063 | 81105 | AL-5C18-10CP2 |
| C8 | 81109 | – | 88081 | 81110 | – |
| Silica | 81117 | – | 81116 | 81118 | – |

¹To be used with semi-prep guard holder (C-1000) and column coupler for All-Guard cartridges (HI-081).

10 µm

| Length / mm | 250 | | Guard column (33 x 7 mm) |
|-------------|-------|-------|--------------------------|
| i.d. / mm | 10 | 22 | |
| C18 | 88334 | 88335 | 970203 |
| Silica | 88338 | 88339 | 970204 |

Column: Alltima C18, 3 µm, 53 x 7 mm Rocket (*p/n:* 50605)

Mobile phase: A: 0.1 % Trifluoroacetic Acid in 0.025 M Ammonium Acetate
B: 0.1 % Trifluoroacetic Acid in Acetonitrile

| Gradient: | Time / min | 0 | 4 |
|-----------|------------|----|----|
| % A | | 80 | 5 |
| % B | | 20 | 95 |

Flow rate: 3.5 mL min⁻¹

Detector: UV at 254 nm

1. Acetazolamide
2. Hydrochlorothiazide
3. Triamterene
4. Hydroflumethiazide
5. Clopamide
6. Trichloromethiazide
7. Indapamide
8. Bumetanide
9. Spironolactone

