

Alltech® Prevail™ Introduction

Alltech



Stable from 100% Organic to 100% Aqueous

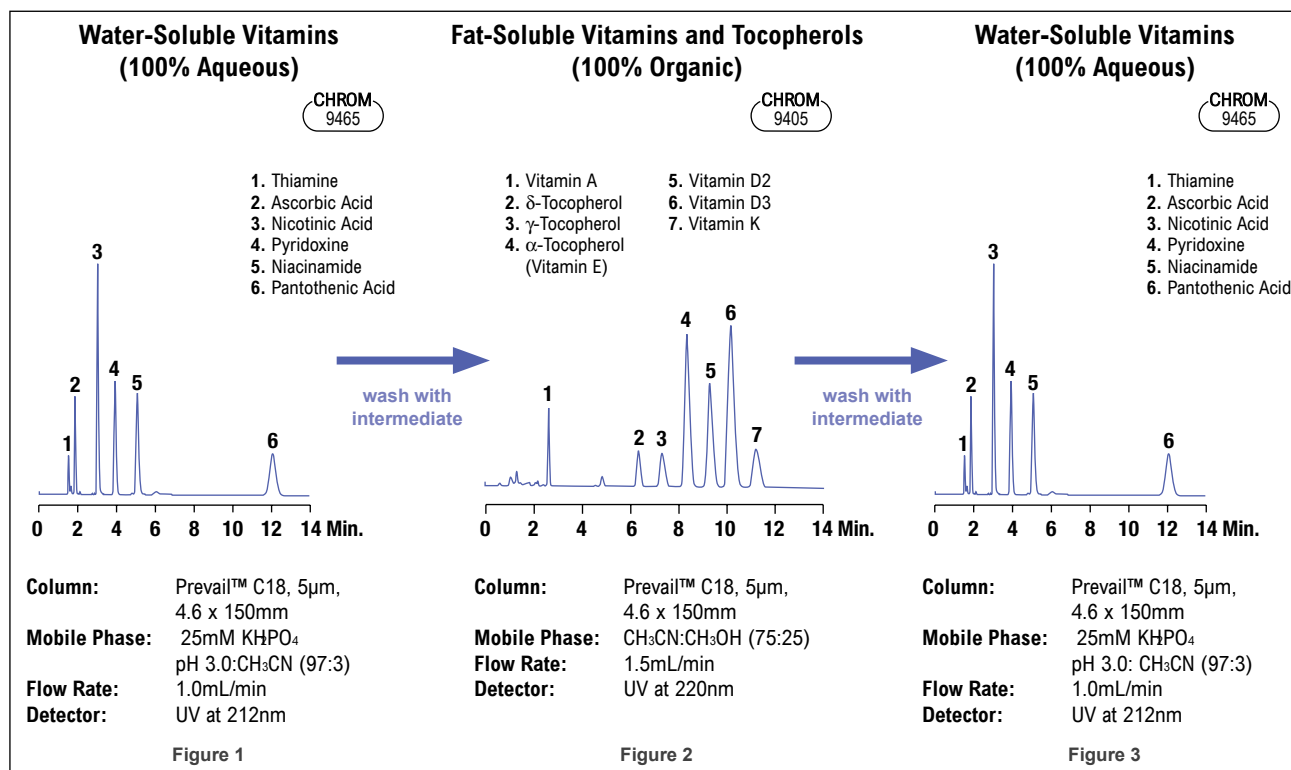
- Long column life in both highly aqueous and highly organic mobile phases
- Excellent retention and reproducibility of highly polar analytes in 100% aqueous mobile phases
- Strong retention of hydrophobic analytes in 100% organic mobile phases, no concerns of solubility, better sensitivity in microbore and ELSD applications
- No phase collapse
- Specialty phases for specific applications

With one **Prevail™ C18** column, retain polar compounds in aqueous mobile phases and hydrophobic compounds in organic mobile phases.

Alltech® Prevail™ Phase Specifications

| Phase | Base Material | Particle Shape | Particle Size | Pore Size | Surface Area | Carbon Load | Phase Type | Endcapped? | USP L-code |
|--------------------------|---------------|----------------|---------------|-----------|----------------------|-------------|------------|------------|------------|
| C18 Select | Silica | Spherical | 3, 5µm | 110Å | 350m ² /g | 17% | Monomeric | Yes | L1 |
| C18 | Silica | Spherical | 3, 5µm | 110Å | 350m ² /g | 15% | Monomeric | Yes | L1 |
| C8 | Silica | Spherical | 3, 5µm | 110Å | 350m ² /g | 8% | Monomeric | Yes | L7 |
| Phenyl | Silica | Spherical | 3, 5µm | 110Å | 350m ² /g | 7% | Monomeric | Yes | L11 |
| Cyano | Silica | Spherical | 3, 5µm | 110Å | 350m ² /g | — | Monomeric | Yes | L10 |
| Amino (NH ₂) | Silica | Spherical | 3, 5µm | 110Å | 350m ² /g | — | Monomeric | No | L8 |
| Silica | Silica | Spherical | 3, 5µm | 110Å | 350m ² /g | — | — | — | L3 |
| Organic Acid | Silica | Spherical | 3, 5µm | 110Å | 350m ² /g | — | Monomeric | Yes | — |
| Carbohydrate ES | Polymer | Spherical | 5µm | — | — | — | — | — | — |

Switch Between 100% Aqueous and 100% Organic Mobile Phases on the Same Column



Prevail™ Columns have highly stable bonded phases that let you use one column for multiple mobile phase conditions. Even switching between extremes such as near 100% aqueous (Figure 1) to 100% organic conditions (Figure 2), and back to near 100% aqueous (Figure 3) on a routine basis is possible, provided that mobile phases are miscible.



Alltech® Prevail™ Reversed-Phase Columns

Prevail™ HPLC Columns

| Packing | Format | i.d. x Length | Part No. |
|--------------------|-----------------|---------------|----------|
| Select C18, 3µm | Microbore | 2.1 x 50mm | 99309 |
| | Microbore | 2.1 x 100mm | 99312 |
| | Microbore | 2.1 x 150mm | 99313 |
| | Solvent-Reducer | 3.0 x 150mm | 99315 |
| | Analytical | 4.6 x 100mm | 99302 |
| | Analytical | 4.6 x 150mm | 99303 |
| | Rocket™ | 7 x 33mm | 99304 |
| Select C18, 5µm | Rocket™ | 7 x 53mm | 99305 |
| | Microbore | 2.1 x 150mm | 99310 |
| | Microbore | 2.1 x 250mm | 99311 |
| | Solvent-Reducer | 3.0 x 150mm | 99316 |
| | Solvent-Reducer | 3.0 x 250mm | 99317 |
| C18, 3µm | Analytical | 4.6 x 150mm | 99300 |
| | Analytical | 4.6 x 250mm | 99301 |
| | Microbore | 150µm x 50mm | 35762 |
| | Microbore | 150µm x 150mm | 35764 |
| | Microbore | 300µm x 50mm | 32831 |
| | Microbore | 300µm x 150mm | 32832 |
| | Microbore | 1.0 x 100mm | 43831 |
| | Microbore | 1.0 x 150mm | 43843 |
| | Expedite™ MS | 2.1 x 10mm | 43861 |
| | Expedite™ MS | 2.1 x 20mm | 43827 |
| | Microbore | 2.1 x 50mm | 43818 |
| | Microbore | 2.1 x 100mm | 43871 |
| | Microbore | 2.1 x 150mm | 99200 |
| | Solvent-Reducer | 3.0 x 150mm | 99322 |
| | Expedite™ MS | 4.6 x 10mm | 43878 |
| | Expedite™ MS | 4.6 x 20mm | 43804 |
| | Analytical | 4.6 x 50mm | 43829 |
| | Analytical | 4.6 x 100mm | 99202 |
| | Analytical | 4.6 x 150mm | 99204 |
| | Rocket™ | 7 x 33mm | 99280 |
| Rocket™ | 7 x 53mm | 99279 | |

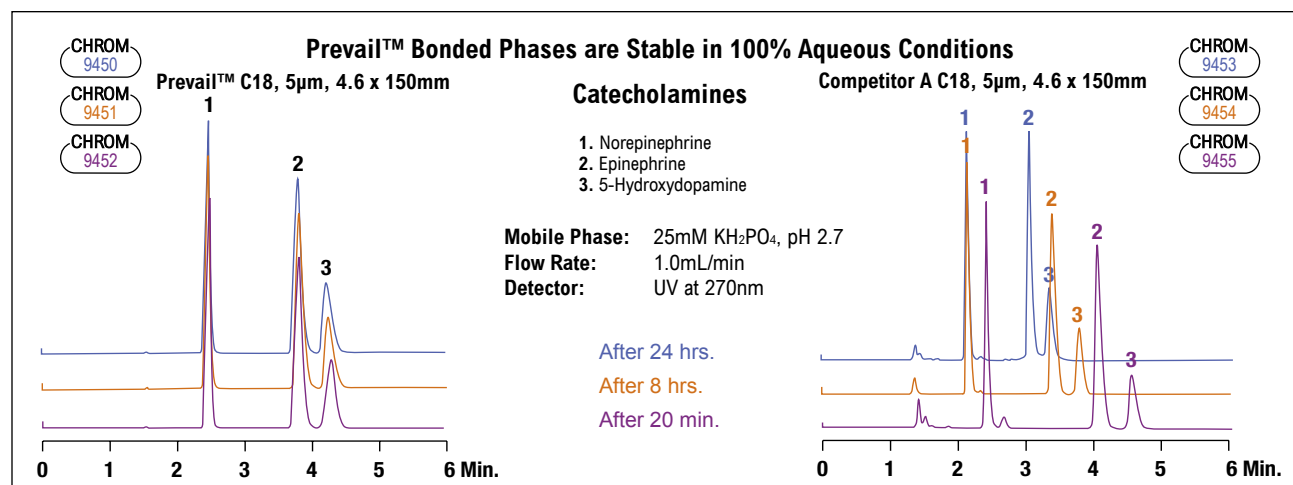
Prevail™ HPLC Columns (continued)

| Packing | Format | i.d. x Length | Part No. | |
|-----------------|-----------------|-----------------|-------------|-------|
| C18, 5µm | Microbore | 150µm x 50mm | 35792 | |
| | Microbore | 150µm x 150mm | 35794 | |
| | Microbore | 300µm x 50mm | 32815 | |
| | Microbore | 300µm x 150mm | 32816 | |
| | Microbore | 2.1 x 150mm | 99206 | |
| | Solvent-Reducer | 3.0 x 150mm | 99320 | |
| | Solvent-Reducer | 3.0 x 250mm | 99321 | |
| | Analytical | 4.6 x 50mm | 43903 | |
| | Analytical | 4.6 x 150mm | 99208 | |
| | Analytical | 4.6 x 250mm | 99210 | |
| | C8, 3µm | Microbore | 2.1 x 150mm | 99212 |
| | | Solvent-Reducer | 3.0 x 150mm | 99325 |
| | | Analytical | 4.6 x 50mm | 43922 |
| | | Analytical | 4.6 x 100mm | 99214 |
| Analytical | | 4.6 x 150mm | 99216 | |
| C8, 5µm | | Microbore | 2.1 x 150mm | 99218 |
| | Solvent-Reducer | 3.0 x 150mm | 99323 | |
| | Solvent-Reducer | 3.0 x 250mm | 99324 | |
| | Analytical | 4.6 x 150mm | 99224 | |
| | Analytical | 4.6 x 250mm | 99229 | |
| | Phenyl, 3µm | Microbore | 1.0 x 100mm | 43893 |
| | | Microbore | 1.0 x 150mm | 43859 |
| | | Expedite™ MS | 2.1 x 10mm | 43873 |
| Expedite™ MS | | 2.1 x 20mm | 43885 | |
| Microbore | | 2.1 x 50mm | 43819 | |
| Microbore | | 2.1 x 100mm | 43872 | |
| Microbore | | 2.1 x 150mm | 99231 | |
| Solvent-Reducer | | 3.0 x 150mm | 99328 | |
| Expedite™ MS | | 4.6 x 10mm | 43887 | |
| Expedite™ MS | | 4.6 x 20mm | 43815 | |
| Analytical | | 4.6 x 50mm | 43869 | |
| Analytical | | 4.6 x 100mm | 99233 | |
| Analytical | | 4.6 x 150mm | 99235 | |
| Rocket™ | | 7 x 33mm | 99282 | |
| Rocket™ | 7 x 53mm | 99281 | | |
| Phenyl, 5µm | Microbore | 2.1 x 150mm | 99237 | |
| | Solvent-Reducer | 3.0 x 150mm | 99326 | |
| | Solvent-Reducer | 3.0 x 250mm | 99327 | |
| | Analytical | 4.6 x 150mm | 99239 | |
| | Analytical | 4.6 x 250mm | 99241 | |

tech tip

Want high throughput on a conventional (non-ultra high-pressure) system?

Choose the Rocket™ column format—no modifications necessary to your existing HPLC system. Choose Expedite™ columns for low volume and microbore systems. See page 31 for more explanation of the Rocket™ and Expedite™ formats.





Alltech® Prevail™ Normal-Phase Columns

Prevail™ HPLC Columns

| Packing | Format | i.d. x Length | Part No. |
|-------------|-----------------|---------------|----------|
| Cyano, 3µm | Microbore | 2.1 x 150mm | 99243 |
| | Solvent-Reducer | 3.0 x 150mm | 99338 |
| | Analytical | 4.6 x 50mm | 43924 |
| | Analytical | 4.6 x 100mm | 99245 |
| | Analytical | 4.6 x 150mm | 99247 |
| Cyano, 5µm | Microbore | 2.1 x 150mm | 99249 |
| | Solvent-Reducer | 3.0 x 150mm | 99329 |
| | Solvent-Reducer | 3.0 x 250mm | 99330 |
| | Analytical | 4.6 x 150mm | 99251 |
| | Analytical | 4.6 x 250mm | 99253 |
| Amino, 3µm | Analytical | 4.6 x 50mm | 43926 |
| | Analytical | 4.6 x 100mm | 99257 |
| | Analytical | 4.6 x 150mm | 99259 |
| Amino, 5µm | Analytical | 4.6 x 150mm | 99263 |
| | Analytical | 4.6 x 250mm | 99265 |
| Silica, 3µm | Microbore | 1.0 x 100mm | 43832 |
| | Microbore | 1.0 x 150mm | 43806 |
| | Expedite™ MS | 2.1 x 10mm | 43841 |
| | Expedite™ MS | 2.1 x 20mm | 43826 |
| | Microbore | 2.1 x 50mm | 43868 |
| | Microbore | 2.1 x 100mm | 43805 |
| | Microbore | 2.1 x 150mm | 99267 |
| | Solvent-Reducer | 3.0 x 150mm | 99341 |
| | Expedite™ MS | 4.6 x 10mm | 43858 |
| | Expedite™ MS | 4.6 x 20mm | 43816 |
| | Analytical | 4.6 x 50mm | 43842 |
| | Analytical | 4.6 x 100mm | 99269 |
| | Analytical | 4.6 x 150mm | 99271 |
| | Rocket™ | 7 x 33mm | 99284 |
| | Rocket™ | 7 x 53mm | 99283 |

Prevail™ HPLC Columns (continued)

| Packing | Format | i.d. x Length | Part No. |
|-------------|-----------------|---------------|----------|
| Silica, 5µm | Analytical | 2.1 x 150mm | 99273 |
| | Solvent-Reducer | 3.0 x 150mm | 99339 |
| | Solvent-Reducer | 3.0 x 250mm | 99340 |
| | Analytical | 4.6 x 150mm | 99275 |
| | Analytical | 4.6 x 250mm | 99277 |

Prevail™ All-Guard™ Cartridges*

| Packing | i.d. x Length | Qty. | Part No. |
|-----------------------------|---------------|------|----------|
| Select C18, 5µm | 2.1 x 7.5mm | 3 | 96690 |
| | 3.0 x 7.5mm | 3 | 99119 |
| | 4.6 x 7.5mm | 3 | 96455 |
| C18, 5µm | 2.1 x 7.5mm | 3 | 96682 |
| | 3.0 x 7.5mm | 3 | 99350 |
| | 4.6 x 7.5mm | 3 | 99286 |
| C8, 5µm | 2.1 x 7.5mm | 3 | 99128 |
| | 3.0 x 7.5mm | 3 | 99351 |
| | 4.6 x 7.5mm | 3 | 99287 |
| Phenyl, 5µm | 2.1 x 7.5mm | 3 | 99130 |
| | 3.0 x 7.5mm | 3 | 99352 |
| | 4.6 x 7.5mm | 3 | 99288 |
| Cyano, 5µm | 2.1 x 7.5mm | 3 | 99131 |
| | 3.0 x 7.5mm | 3 | 99353 |
| | 4.6 x 7.5mm | 3 | 99289 |
| Amino, 5µm | 4.6 x 7.5mm | 3 | 99290 |
| Silica, 5µm | 2.1 x 7.5mm | 3 | 99133 |
| | 3.0 x 7.5mm | 3 | 99354 |
| | 4.6 x 7.5mm | 3 | 99291 |
| All-Guard™ Cartridge Holder | | ea | 80101 |

*All-Guard™ holder required. Other particle sizes available.

Alltech® Prevail™ Organic Acid Columns

Get Unsurpassed Resolution for Common Organic Acids

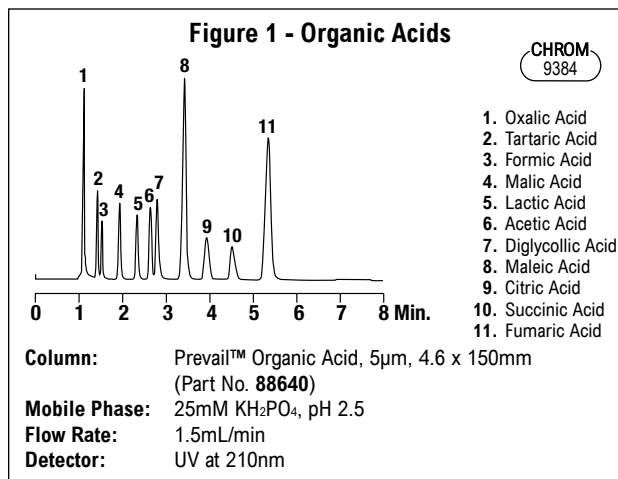
- Acid stable for long column lifetimes
- Silica-based for maximum efficiency and high-resolution
- Short run times and high sample throughput at ambient temperature with Rocket™ format
- Lower cost than polymeric organic acid columns

Prevail™ Organic Acid (OA) columns separate common organic acids with an unsurpassed combination of resolution, speed, sensitivity, and simplicity. A simple acidic phosphate buffer and a Prevail™ OA column at ambient temperature will separate 11 short-chain organic acids in less than 6 minutes.

Use pH to adjust column selectivity. Lowering the mobile phase pH progressively suppresses the ionization of the carboxylic acids, making them more hydrophobic. This gives you the ability to move these peaks relative to other peaks in the chromatogram, and it simplifies method development.

Prevail™ HPLC Columns

| Packing | Format | i.d. x Length | Standard Part No. | Waters® Fittings Part No. |
|---------|------------|---------------|-------------------|---------------------------|
| OA, 3µm | Microbore | 2.1 x 100mm | 88648 | — |
| | Analytical | 4.6 x 100mm | 88650 | 88750 |
| | Analytical | 4.6 x 150mm | 88655 | 88755 |
| | Rocket™ | 7 x 33mm | 99292 | — |
| | Rocket™ | 7 x 53mm | 50755 | — |
| OA, 5µm | Analytical | 4.6 x 150mm | 88640 | 88740 |
| | Analytical | 4.6 x 250mm | 88645 | 88745 |



Separate 11 short-chain organic acids in less than six minutes.

Prevail™ All-Guard™ Cartridges*

| Packing | i.d. x Length | Qty. | Part No. |
|-----------------------------|---------------|------|----------|
| Organic Acid, 5µm | 4.6 x 7.5mm | 3 | 96429 |
| All-Guard™ Cartridge Holder | | ea | 80101 |

*All-Guard™ holder required. Other particle sizes available.



Alltech® Prevail™ Carbohydrate ES Columns

Get Better Retention Times, Longer Column Life, and Improved Baselines Compared to Traditional Amino Carbohydrate Columns

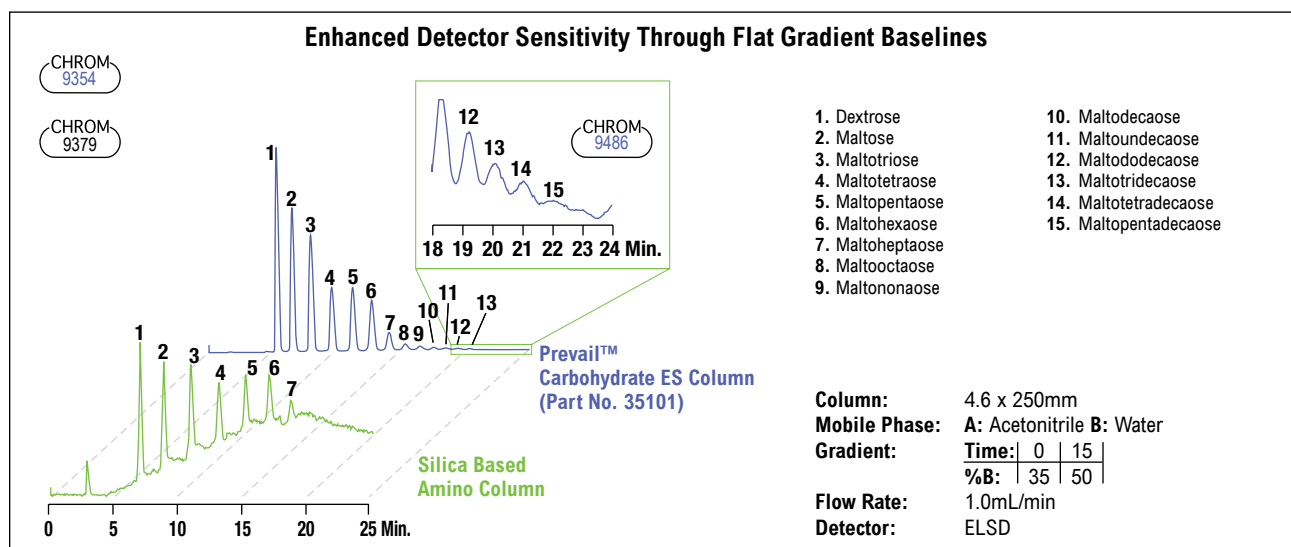
- Longer column life: Hybrid phase has the ruggedness of silica with the stability of a polymer
- Quieter baselines compared to traditional amino carbohydrate columns, even with gradients
- Reduce run times with more mobile phase choices
- Compatible with gradient ELSD applications

Quiet Gradient Baselines

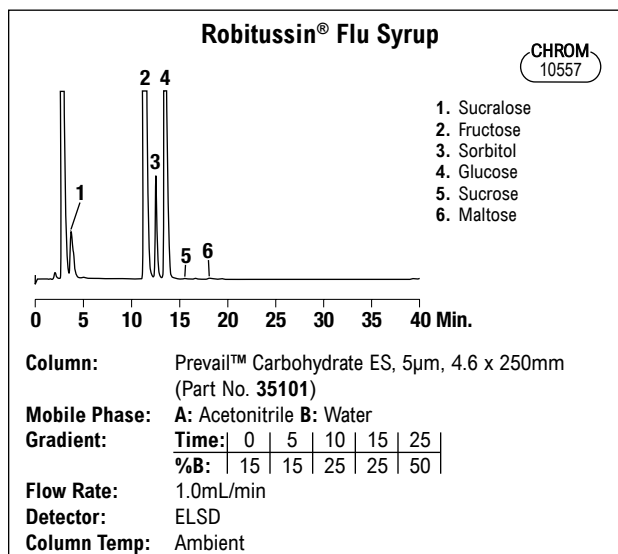
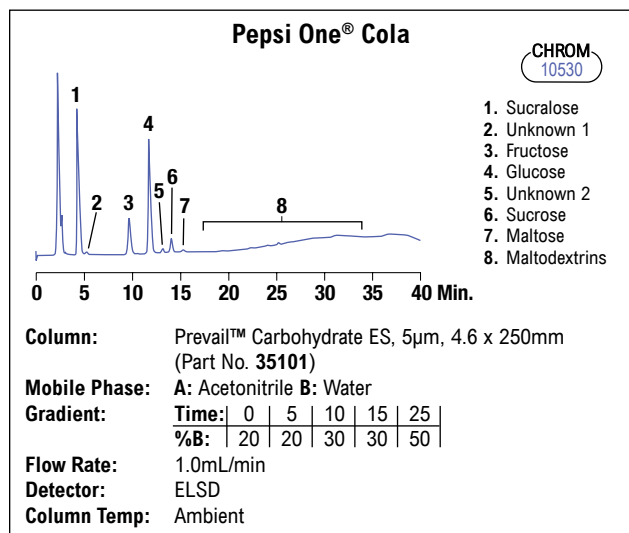
Prevail™ Carbohydrate ES Columns are excellent for isocratic separations with common detectors, but the column's real power shows with the ELSD and a solvent gradient. Enjoy the powerful selectivity, reduced run times, and efficient peaks from gradients while seeing the quiet, stable baselines that maximize sensitivity.

Better Resolution and Peak Shape

Prevail™ Carbohydrate ES Columns are versatile enough for mono- and oligosaccharides and sugar alcohols. They produce single peaks for reducing sugars at ambient temperatures, eliminating the need for column heating.



Use gradients with a Prevail™ Carbohydrate ES column and the ELSD for shorter run times, better resolution, and greater sensitivity. By comparison, silica-based amino columns give noisy, shifting baselines.



Prevail™ HPLC Columns

| Packing | Format | i.d. x Length | Part No. |
|------------------|------------|---------------|--------------|
| Carbohydrate ES, | Analytical | 4.6 x 150mm | 35102 |
| 5µm | Analytical | 4.6 x 250mm | 35101 |
| | Rocket™ | 7 x 53mm | 35104 |

Prevail™ All-Guard™ Cartridges*

| Packing | i.d. x Length | Qty. | Part No. |
|-----------------------------|---------------|------|--------------|
| Carbohydrate ES, 5µm | 4.6 x 7.5mm | 3 | 96435 |
| All-Guard™ Cartridge Holder | | ea | 80101 |

*All-Guard™ holder required. Other particle sizes available.