

# Alltech® Prevail™ Introduction

Alltech



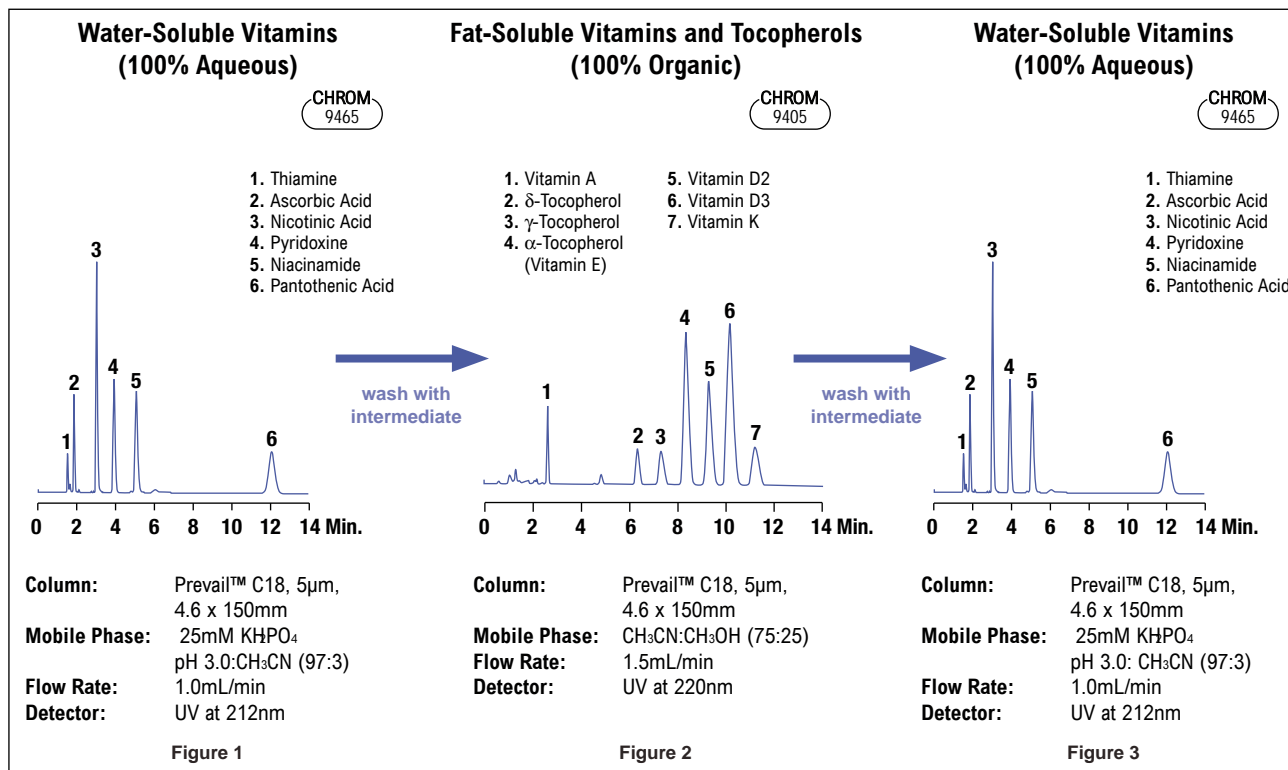
## Stable from 100% Organic to 100% Aqueous

- 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 <sup>2</sup> /g	17%	Monomeric	Yes	L1
C18	Silica	Spherical	3, 5µm	110Å	350m <sup>2</sup> /g	15%	Monomeric	Yes	L1
C8	Silica	Spherical	3, 5µm	110Å	350m <sup>2</sup> /g	8%	Monomeric	Yes	L7
Phenyl	Silica	Spherical	3, 5µm	110Å	350m <sup>2</sup> /g	7%	Monomeric	Yes	L11
Cyano	Silica	Spherical	3, 5µm	110Å	350m <sup>2</sup> /g	—	Monomeric	Yes	L10
Amino (NH <sub>2</sub> )	Silica	Spherical	3, 5µm	110Å	350m <sup>2</sup> /g	—	Monomeric	No	L8
Silica	Silica	Spherical	3, 5µm	110Å	350m <sup>2</sup> /g	—	—	—	L3
Organic Acid	Silica	Spherical	3, 5µm	110Å	350m <sup>2</sup> /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
Rocket™	7 x 53mm	99305	
Select C18, 5µm	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
	Analytical	4.6 x 150mm	99300
C18, 3µm	Analytical	4.6 x 250mm	99301
	Microbore	150µm x 50mm	35762
C18, 3µm	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

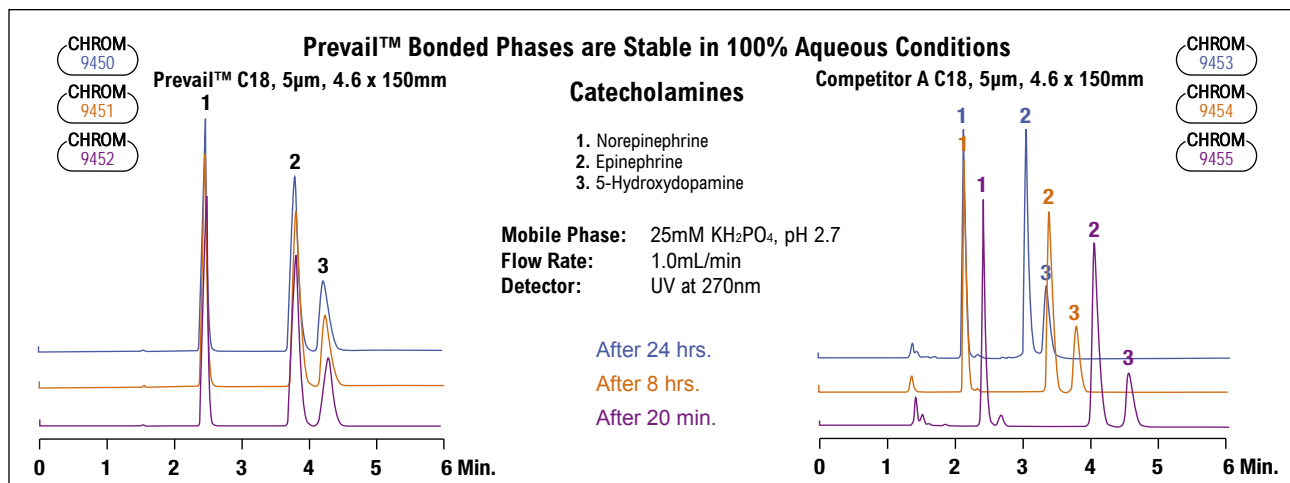
## Prevail™ HPLC Columns (continued)

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

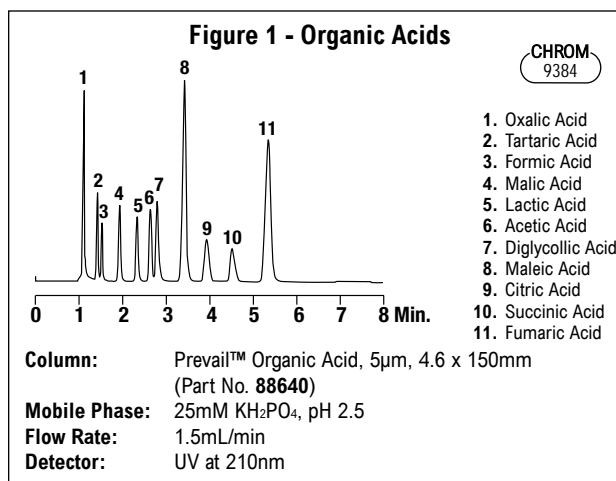
- Acid stable for long column lifetimes
- Silica-based for maximum efficiency and high-resolution
- Short run times and high sample throughput at ambient temperature with Rocket™ format
- Lower cost than polymeric organic acid columns

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

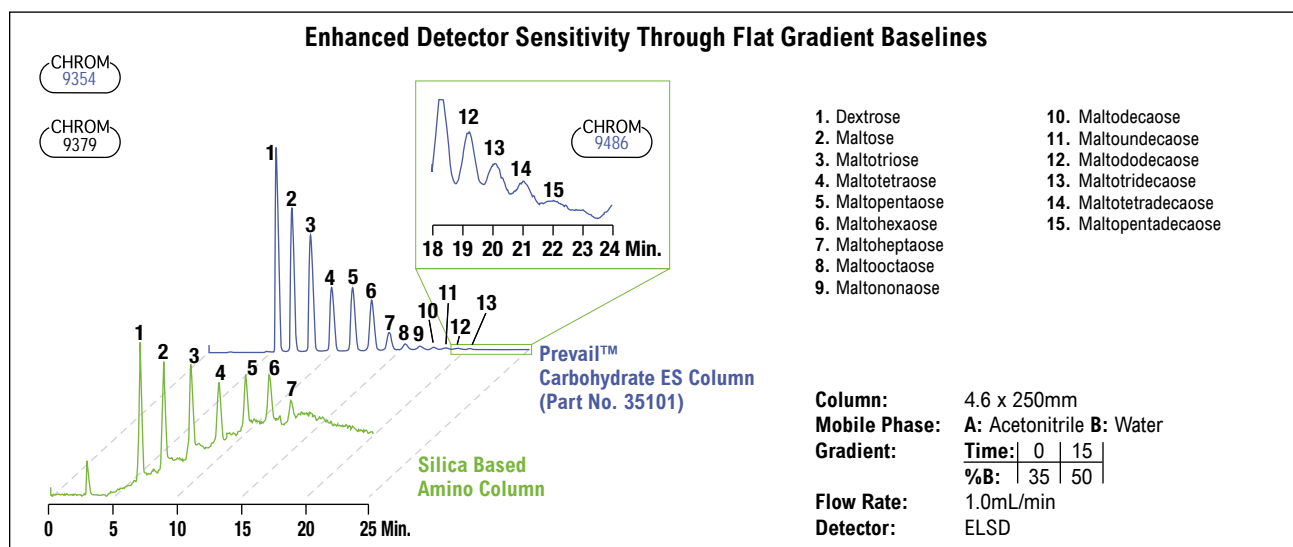
- Longer column life: Hybrid phase has the ruggedness of silica with the stability of a polymer
- Quieter baselines compared to traditional amino carbohydrate columns, even with gradients
- Reduce run times with more mobile phase choices
- Compatible with gradient ELSD applications

## Quiet Gradient Baselines

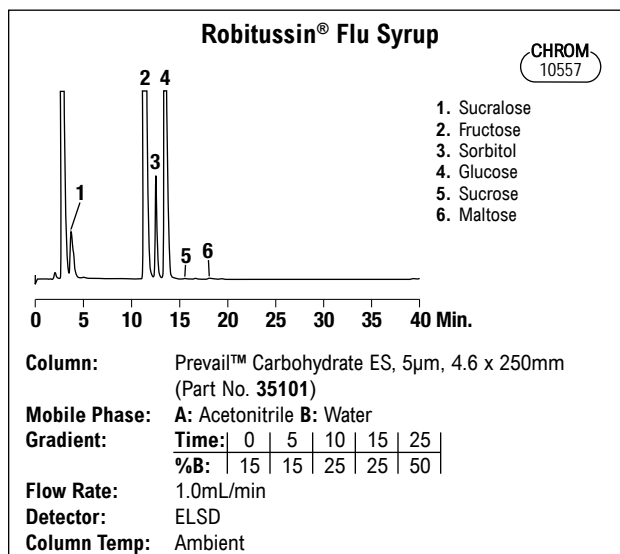
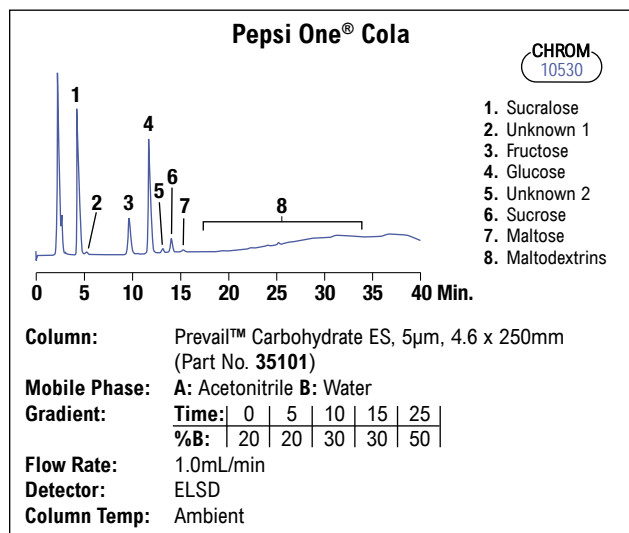
Prevail™ Carbohydrate ES Columns are excellent for isocratic separations with common detectors, but the column's real power shows with the ELSD and a solvent gradient. Enjoy the powerful selectivity, reduced run times, and efficient peaks from gradients while seeing the quiet, stable baselines that maximize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