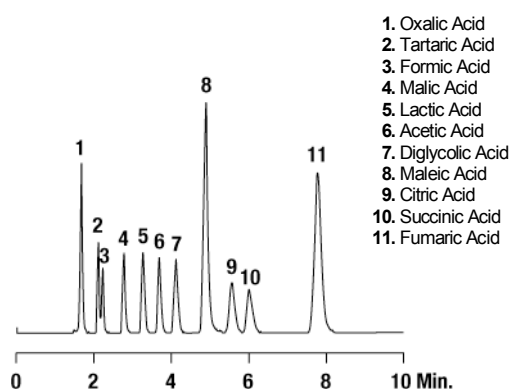


# Prevail™ Organic Acid HPLC Columns

Prevail™ Organic Acid Columns separate a wide range of organic acids with an unsurpassed combination of resolution, speed, sensitivity, and simplicity. Under the right set of conditions and an appropriate detector, Prevail™ Organic Acid Columns can be used to analyze not only short chain organic acids but also aromatic acids, long chain fatty acids, alcohols, and even carbohydrates. Use the retention time values in **Table 1** to aid in method development and mobile phase selection. Need high throughput or fast analysis? Run times can be dramatically decreased using the Rocket™ Column format or using a longer 250 x 4.6mm column to increase resolution.

## Short Chain Organic Acids

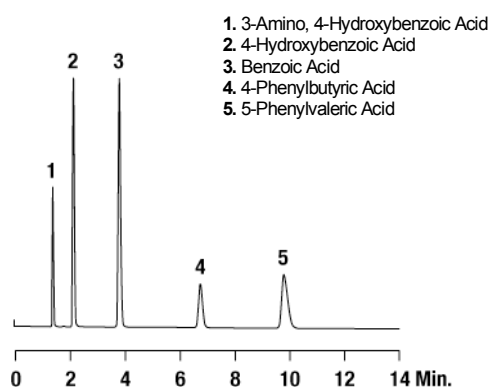
CHROM 9536



**Column:** Prevail™ Organic Acid 150 x 4.6mm 5µm  
**Mobile Phase:** 25mM KH<sub>2</sub>PO<sub>4</sub>, pH 2.5 with Phosphoric Acid  
**Flow Rate:** 1.0mL/min  
**Detector:** UV at 210nm

## Aromatic Acids

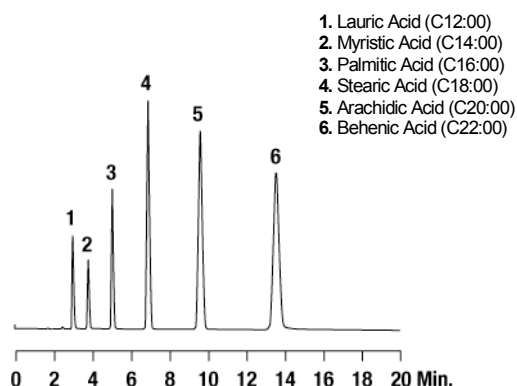
CHROM 9538



**Column:** Prevail™ Organic Acid 150 x 4.6mm 5µm  
**Mobile Phase:** 60% 25mM KH<sub>2</sub>PO<sub>4</sub>, pH 2.5 40% CH<sub>3</sub>CN  
**Flow Rate:** 1.0mL/min  
**Detector:** UV at 254nm

## Fatty Acids

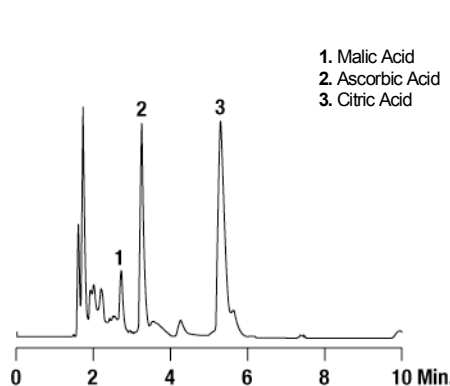
CHROM 9539



**Column:** Prevail™ Organic Acid 150 x 4.6mm 5µm  
**Mobile Phase:** 75% CH<sub>3</sub>CN 25% MeOH  
**Flow Rate:** 1.0mL/min  
**Detector:** ELSD

## Organic Acids in Orange Juice

CHROM 9478



**Column:** Prevail™ Organic Acid 150 x 4.6mm 5µm  
**Mobile Phase:** 25mM KH<sub>2</sub>PO<sub>4</sub>, pH 2.5  
**Flow Rate:** 1.0mL/min  
**Detector:** UV at 210nm

Table 1 - Retention Times (in min) of Common Analytes on Prevail Organic Acid 150 x 4.6mm, 5µm, 1.0mL/min, Using Various Mobile Phases				
Analyte	25mM KH <sub>2</sub> PO <sub>4</sub> pH 2.5 with Phosphoric Acid	Water pH 2.5 with Formic Acid	60% 25mM KH <sub>2</sub> PO <sub>4</sub> pH 2.5, 40% Acetonitrile	75% Acetonitrile 25% Methanol
Oxalic Acid	1.64	1.59	EV	EV
Tartaric Acid	2.09	2.15	EV	EV
Formic Acid	2.20	ND	EV	EV
Malic Acid	2.76	2.81	EV	EV
Lactic Acid	3.25	ND	EV	EV
Acetic Acid	3.67	ND	EV	EV
Glycolic Acid	2.09	ND	EV	EV
Diglycolic Acid	4.11	3.99	NT	EV
Maleic Acid	4.87	ND	NT	EV
Citric Acid	5.56	5.54	NT	EV
Succinic Acid	6.01	6.14	NT	EV
Fumaric Acid	7.76	ND	NT	EV
Quinic Acid	NT	2.21	EV	EV
Pyruvic Acid	3.46	NT	NT	EV
Oxalacetic Acid	2.17	2.26	EV	EV
2-Ketoglutaric Acid	3.28	3.41	EV	EV
Glutamic Acid	NT	1.82	EV	EV
Ascorbic Acid	3.24	2.95	EV	EV
Propionic Acid	>10.00	>10.00	NT	NT
Butyric Acid	>10.00	>10.00	2.50	NT
Benzoic Acid	>10.00	>10.00	3.84	NT
3-Amino, 4-Hydroxybenzoic Acid	>10.00	>10.00	1.40	NT
Gallic Acid	>10.00	>10.00	1.48	NT
4-Hydroxybenzoic Acid	>10.00	>10.00	2.16	NT
4-Phenylbutyric Acid	>10.00	>10.00	6.77	NT
5-Phenylvaleric Acid	>10.00	>10.00	9.80	NT
4-Butoxybenzoic Acid	>10.00	>10.00	17.74	NT
Capric Acid	DNE	DNE	>20.00	2.52
Lauric Acid	DNE	DNE	>20.00	3.02
Myristic Acid	DNE	DNE	>20.00	3.83
Palmitic Acid	DNE	DNE	>20.00	5.08
Stearic Acid	DNE	DNE	>20.00	6.94
Arachidic Acid	DNE	DNE	>20.00	9.65
Behenic Acid	DNE	DNE	>20.00	13.55
Glucose	ND	1.76	EV	EV
Fructose	ND	1.82	EV	EV
Sucrose	ND	2.33	EV	EV
Maltose	ND	2.06	EV	EV
Lactose	ND	1.93	EV	EV
Stachyose	ND	2.89	EV	EV
Maltotriose	ND	2.58	EV	EV
Galactose	ND	1.73	EV	EV
Mannitol	ND	1.78	EV	EV
Glycerol	ND	1.96	EV	EV
Methanol	2.28	ND	EV	EV
Ethanol	3.65	ND	EV	EV
Isopropanol	7.10	ND	EV	EV
Ethylene Glycol	ND	ND	EV	EV

DNE = Does Not Elute      EV = Elutes In Void      NT = Not Tested      ND = Not Capable of Being Determined With Detector Used

#### Prevail™ Analytical Columns

Packing	Particle Size	Length x i.d.	Industry Standard Part No.	Waters Part No.
OA	5µm	150 x 4.6mm	88640	88740
	5µm	250 x 4.6mm	88645	88745
	3µm	100 x 4.6mm	88650	88750
	3µm	150 x 4.6mm	88655	88755

#### Prevail™ Rocket™ Columns

Packing	Part Size	Length x i.d.	Part No.
OA	3µm	53 x 7mm	50755
	3µm	33 x 7mm	99292

[www.discoverysciences.com](http://www.discoverysciences.com)

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