

GreatSmart™ (formerly GraceSmart) HPLC Columns

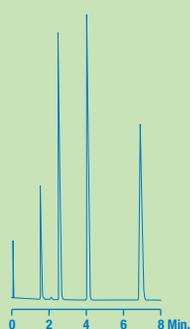
- High Purity Phases
- Efficient and Reproducible
- General Use Selectivity
- Exceptional Value



High Quality HPLC Phases

High purity silica and uniform bonded phase coverage translates to symmetrical peaks for acids/bases, and predictable reversed phase selectivity. Whether routine analysis or new method developments, use GreatSmart™ columns to get premium performance without a premium price.

Acids, Bases and Neutrals



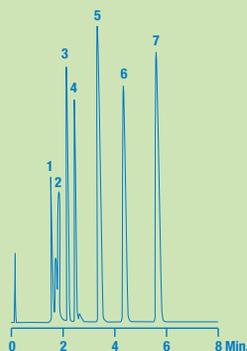
- CHROM 10695
1. Uracil
 2. Amitriptyline
 3. Phenylvaleric Acid
 4. Toluene

Column: GreatSmart™ RP18, 5µm, 150 x 4.6mm
Mobile Phase: 50% MeCN/50% 50mM KH₂PO₄ pH 3 at 35°C

Get symmetrical peaks shapes for strong acids and bases

Standards Mix

CHROM 10696



1. Nicotine
2. Quinine
3. Diphenhydramine
4. Nortriptyline
5. 2,4, Dichlorophenoxy acetic acid
6. 2,4, Dichlorophenoxy propionic acid
7. 2,4, Dichlorophenoxy butyric acid

Column: GreatSmart™ RP18, 5µm, 150 x 4.6mm
Mobile Phase: 50% MeCN/50% 50mM KH₂PO₄ pH 3 at 35°C

Baseline resolve challenging separations

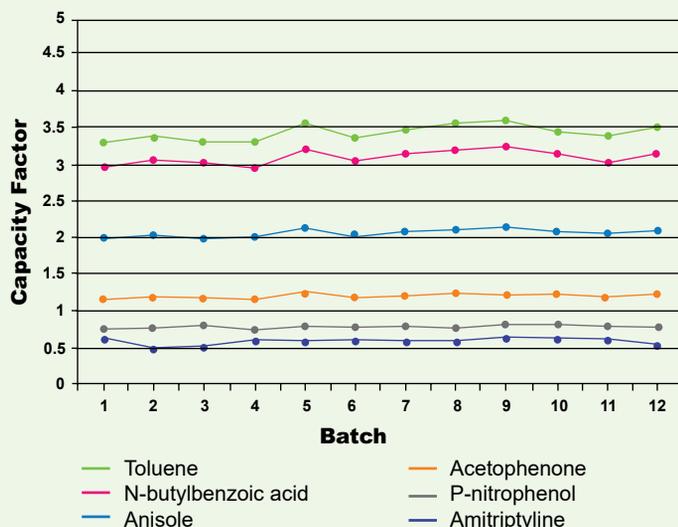
GreatSmart™ Specifications

Phase	C18
Encapping	TMS, nonpolar
Typical Efficiency	>85,000 plates/m
Surface Area	220m ² /g
Pore Size	120Å
Particle Size	5µm

Reproducible Methods Start with Reproducible Columns

Our tightly controlled silica synthesis and bonding keep capacity factor and selectivity variations to a minimum. The advanced packing methods deliver consistently high column-to-column efficiency.

Highly Reproducible Selectivity

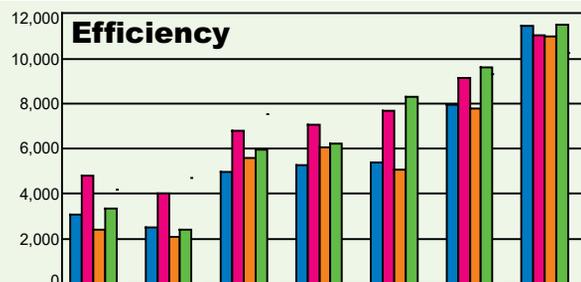


Consistent batch-to-batch capacity for acidic, basic & neutral compounds

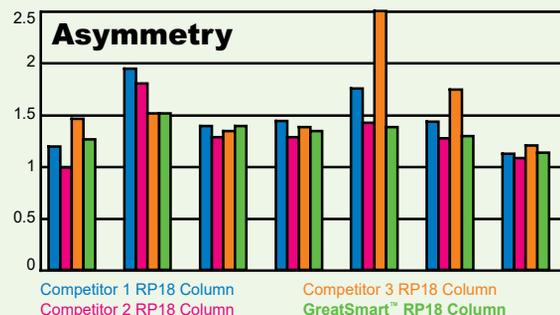
Expect Competitive Performance

Efficient manufacturing is driving force for competitive pricing, but certainly not at the risk of non-competitive performance. GreatSmart columns show equal or better efficiency and asymmetries for challenging base and acid components in comparison to industry leading columns

Efficiency

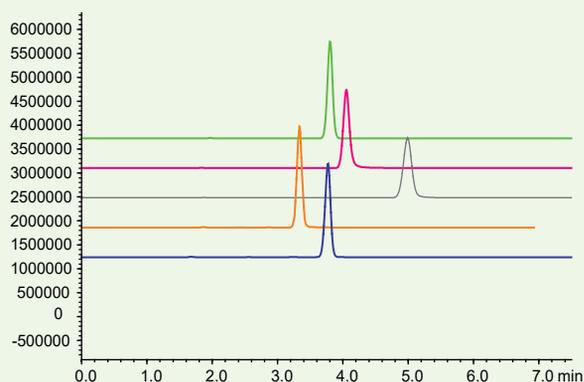


Asymmetry



GreatSmart™ columns compares favorably to leading competitor columns

Amoxicillin (U.S.P.)



— GreatSmart™ C18 Column Competitor 1
— C18 Column
— Competitor 2 C18 Column
— Competitor 3 C18 Column
— Competitor 4 C18 Column

Column: GreatSmart™ C18 Column, 4.6 x 250mm
(Part No. **5138810**)

Mobile Phase: Isocratic, 0.05 N monobasic potassium phosphate pH5:
Acetonitrile 96:4

Flow Rate: 1.5ml/min

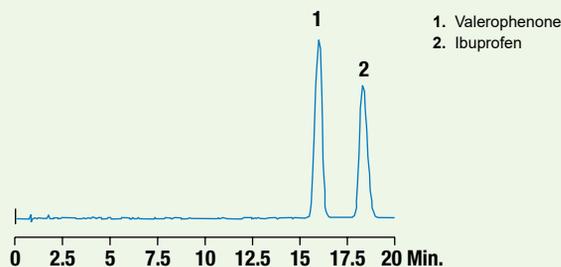
Detector: UV, 230nm

Column Temp: 30°C

Injection Vol: 10µl

	USP Spec	GreatSmart™ C18 Col	Comp 1 C18 Col	Comp 2 C18 Col	Comp 3 C18 Col	Comp 4 C18 Col
Ret. Time (min)	N/A	3.800	4.050	4.988	3.333	3.768
Theoretical plates	≥1700	8543	7216	6230	7049	7680
Tailing Factor	≤2.5	1.015	1.180	1.041	1.034	0.979
k'	1.1 ≤ k' ≤ 2.8	1.2	1.6	2.3	0.99	1.6

Ibuprofen (U.S.P.)



1. Valerophenone
 2. Ibuprofen

Column: GreatSmart™ C18 Column, 4.6 x 150mm
(Part No. **5138812**)

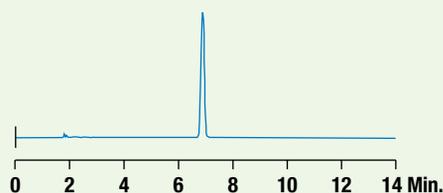
Mobile Phase: H₂O (adjusted with phosphoric acid to a pH of 2.5) :
Acetonitrile 6.5:3.5

Flow Rate: 2ml/min

Detector: UV, 214nm

Injection Vol: 5µl

Simvastatin Tablets (U.S.P.)



Column: GreatSmart™ C18 Column, 4.6 x 250mm
(Part No. **5138810**)

Mobile Phase: 0.39% monobasic sodium phosphate pH4.5: Acetonitrile 35:65

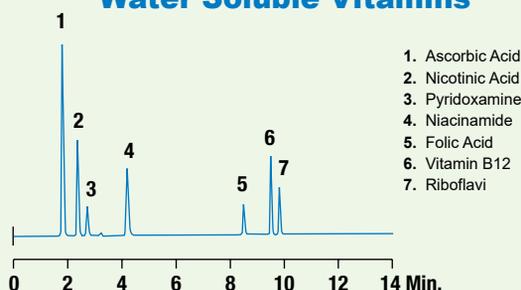
Flow Rate: 1.5ml/min

Detector: UV, 238nm

Column Temp: 45°C

Injection Vol: 10µl

Water Soluble Vitamins



1. Ascorbic Acid
 2. Nicotinic Acid
 3. Pyridoxamine
 4. Niacinamide
 5. Folic Acid
 6. Vitamin B12
 7. Riboflavin

Column: GreatSmart™ C18 Column, 5µm, 4.6 x 150mm
(Part No. **5138812**)

Mobile Phase: A: 0.1M NH₄H₂PO₄ Buffer, pH4.5

B: Acetonitrile

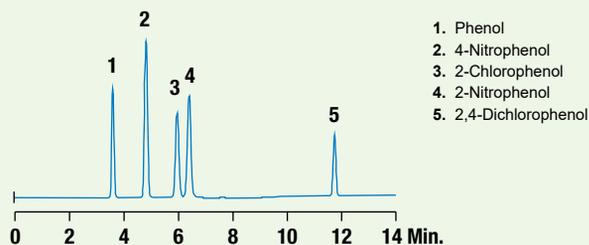
Gradient: (Time, %B): (0,5), (4,5), (10,40), (15,40)

Flow Rate: 1.0mL/min

Detector: UV at 254nm

Injection Vol: 2µl

Phenols



1. Phenol
 2. 4-Nitrophenol
 3. 2-Chlorophenol
 4. 2-Nitrophenol
 5. 2,4-Dichlorophenol

Column: GreatSmart™ C18 Column, 5µm, 4.6 x 150mm
(Part No. **5138810**)

Mobile Phase: A: 1% Glacial Acetic Acid in Water

B: 1% Glacial Acetic Acid in Methanol

Gradient: (Time, %B): (0,45), (6,45), (8,60), (15,80)

Flow Rate: 1.0mL/min

Detector: UV at 280nm

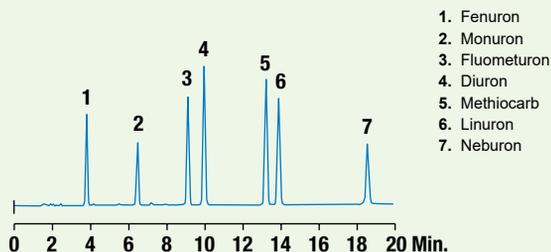
Injection Vol: 10µl

Choose Wisely - GreatSmart® Columns

Grace Davison Discovery Sciences sets a new standard in HPLC columns. We make everything -from the silica particle to the finished product. Our streamlined manufacturing process allows delivery of the highest performance, at an exceptional value!

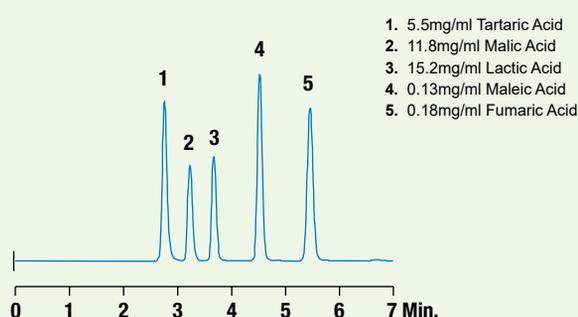
GreatSmart™ RP18 Columns			
Part No.	i.d. x Length	Particle Size	Price
5138812	4.6 x 150mm	5µm	inquiry
5138810	4.6 x 250mm	5µm	inquiry
5138811	2.1 x 150mm	5µm	inquiry
5138813	2.1 x 250mm	5µm	inquiry

Carbamate & Urea



Column: GreatSmart™ C18 Column, 120Å, 5µm, 4.6 x 150mm (Part No 5138812)
Mobile Phase: A: 0.025M KH₂PO₄, pH3.2 B: Acetonitrile
Gradient: (Time, %B): (0,30), (20,60)
Flow Rate: 1.0ml/min
Detector: UV at 240nm
Injection Vol: 10µl

Organic Acids



Column: GreatSmart™ C18 Column, 120Å, 5µm, 4.6 x 150mm (Part No 5138810)
Mobile Phase: 0.025M KH₂PO₄(pH2.5) : Methanol, 97:3
Flow Rate: 0.7ml/min
Detector: UV at 220nm
Injection Vol: 1µl

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Dr. Maisch GmbH

Any Column, Any Size, Any Media

Dr. Maisch HPLC GmbH acquired associated Grace Davison Discovery Sciences product lines in 2016, please kindly find official announcement with link below:
<https://grace.com/en-us/Pages/discovery-sciences.aspx>

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