

# DISCOVERY<sup>®</sup>

HPLC and SPE Products for Pharmaceutical Analysis and Purification

INTRODUCING

## Discovery C18 HPLC Columns

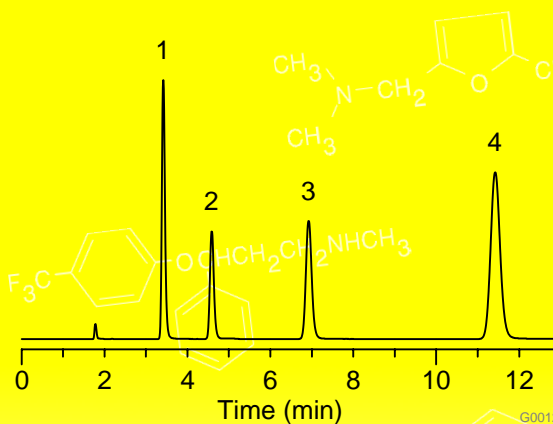
- excellent reproducibility
- exceptional peak shape for basic and acidic analytes
- lower hydrophobicity than many comparable C18 columns, providing faster analysis
- resolution of geometrical isomers and other structurally closely related compounds
- separation of peptides and small proteins
- suitable for LC/MS applications
- stable from pH 2.0 to 8.0

HERE'S THE PROOF

### Parabens

Discovery C18 column  
 15cm x 4.6mm ID, 5µm particles  
 MeCN:H<sub>2</sub>O (40:60)  
 1mL/min  
 20°C  
 UV, 254nm  
 10µL sample

1. Methyl paraben
2. Ethyl paraben
3. Propyl paraben
4. Butyl paraben



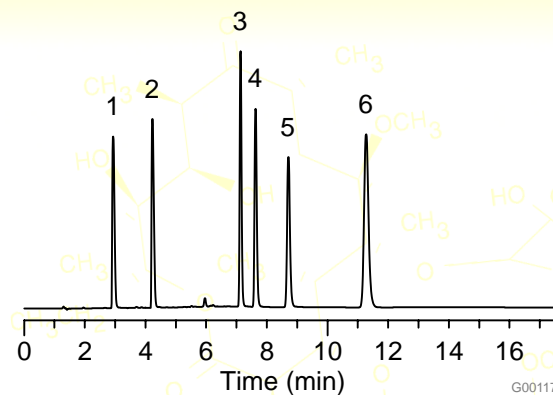
### Antibiotics (β-Lactam)

Discovery C18 column  
 15cm x 4.6mm, 5µm particles  
 A: 0.01% TFA in H<sub>2</sub>O  
 B: 0.01% TFA in MeCN  
 1.5mL/min  
 10µL sample

#### Gradient Program

Time (min.)	%B
0	5
5	35
20	35

1. Amoxicillin
2. Ampicillin
3. Piperacillin
4. Penicillin G
5. Penicillin V
6. Cloxacillin



**SUPELCO**

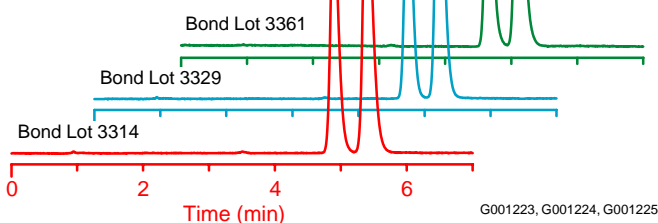
Supelco Park,  
 Bellefonte, PA 16823-0048  
 phone:  
 800-247-6628 / 814-359-3441  
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 800-447-3044 / 814-359-3044  
 internet:  
 www.sigma-aldrich.com  
 email:  
 supelco@sial.com

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### Reproducibility and resolution of geometrical isomers

Discovery C18 column, 15cm x 4.6mm ID, 5µm particles, MeOH/25mM KH<sub>2</sub>PO<sub>4</sub>, pH 3.0 (10:90), 2mL/min, 20°C, 214nm, 0.3µL sample

1. Ephedrine
2. Pseudoephedrine



G001223, G001224, G001225

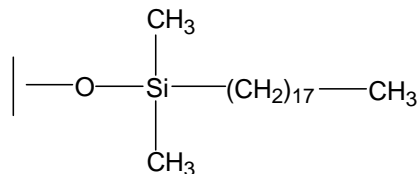
### Discovery C18 properties

**Silica:** particles: 5µm spherical  
 surface area: 200m<sup>2</sup>/g  
 pH range: 2 - 8.0

**pore size:** 180Å  
**pore volume:** 1mL/g  
**metals (ppm):** Fe <20  
 Na/Ca <5  
 Mg/K/Al/Ti <1

#### Bonded Phase

>12.3%C, 3.0µmoles/m<sup>2</sup> endcapped

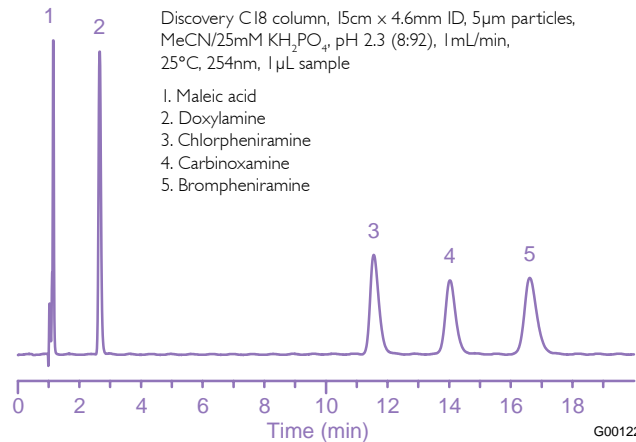


G000835

### Strongly basic antihistamines

Discovery C18 column, 15cm x 4.6mm ID, 5µm particles, MeCN/25mM KH<sub>2</sub>PO<sub>4</sub>, pH 2.3 (8:92), 1mL/min, 25°C, 254nm, 1µL sample

1. Maleic acid
2. Doxylamine
3. Chlorpheniramine
4. Carbinoxamine
5. Brompheniramine

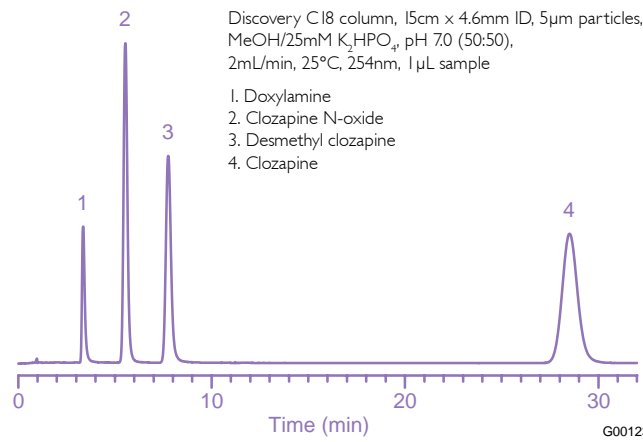


G001229

### Basic drug and metabolites

Discovery C18 column, 15cm x 4.6mm ID, 5µm particles, MeOH/25mM K<sub>2</sub>HPO<sub>4</sub>, pH 7.0 (50:50), 2mL/min, 25°C, 254nm, 1µL sample

1. Doxylamine
2. Clozapine N-oxide
3. Desmethyl clozapine
4. Clozapine



G001230

## ORDERING INFORMATION:

### Discovery C18 HPLC Columns

ID (mm)	LENGTH (cm)	CAT. NO.	ID (mm)	LENGTH (cm)	CAT. NO.
2.1	5	50494721	4.0	5	504947-40
2.1	10	569220-U	4.0	10	569222-U
2.1	12.5	569229-U	4.0	12.5	569231-U
2.1	15	50495521	4.0	15	504955-40
3.0	5	504947-30	4.0	25	504971-40
3.0	10	569221-U	4.6	5	504947
3.0	12.5	569230-U	4.6	10	569223-U
3.0	15	504955-30	4.6	12.5	569232-U
3.0	25	504971-30	4.6	15	504955
			4.6	25	504971

### Discovery C18 Special Application Kits

DESCRIPTION	CAT. NO.
<b>DISCOVERY C18 VALIDATION PACKS<sup>1</sup></b>	
5cm x 2.1mm ID Columns	55700-U21
10cm x 2.1mm ID Columns	569800-U
15cm x 2.1mm ID Columns	55702-U21
5cm x 4.6mm ID Columns	55700-U
10cm x 4.6mm ID Columns	569801-U
15cm x 4.6mm ID Columns	55702-U
25cm x 4.6mm ID Columns	55704-U

<sup>1</sup> Identical columns made from three different bonded phase lots.

### 2cm Supelguard™ Cartridges with 5µm Discovery Packings

DESCRIPTION	CAT. NO.
<b>4.0mm ID Cartridges<sup>2</sup></b>	
kit <sup>3</sup>	505129
pk of 2	505137
<b>3.0mm ID Cartridges</b>	
kit <sup>3</sup>	59575-U
pk of 2	59576-U
<b>2.1mm ID Cartridges</b>	
kit <sup>3</sup>	505161
pk of 2	505188

<sup>2</sup> For 4.0mm ID and 4.6mm ID analytical columns.  
<sup>3</sup> Kits include one cartridge, a stand-alone holder, a piece of tubing, and 2 nuts and ferrules.

Additional sizes are available - please inquire.

Discover the benefits for yourself. Phone 800-247-6628 or 814-359-3441 for your column today!

**SUPELCO** • Supelco Park, Bellefonte, PA 16823-0048 USA • Ph: 800-247-6628 or 814-359-3441 • Fax: 800-447-3044 or 814-359-3044

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