

07

Core-Shell Columns

Meteoric Core	72-74
Ordering Information	74

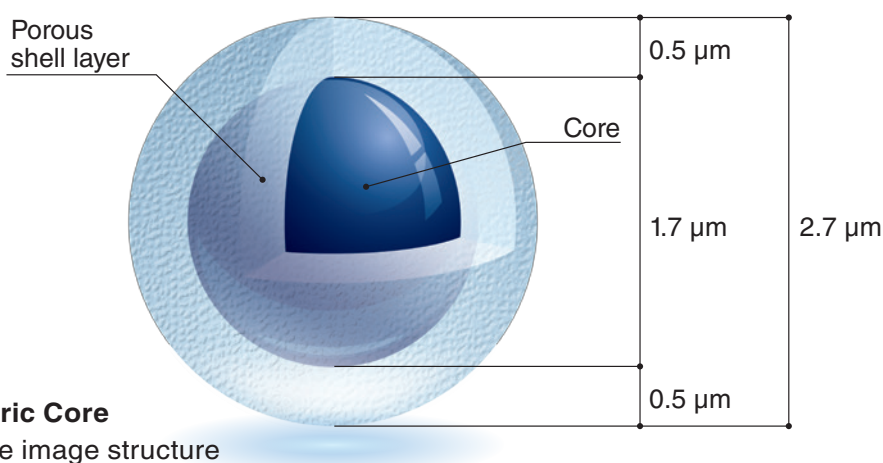
Meteoric Core

Meteoric Core is Core-Shell column with outstanding resolution for UHPLC & HPLC. Meteoric Core can be used across a wide pH range and provides excellent peak shape for basic and coordination compounds compared to conventional columns or competitors'. This feature enables smoother method development. Meteoric Core is ideal for ultrafast and high resolution analysis. Meteoric Core can reduce its backpressure by half compared to sub-2 μm columns with the same resolution as this. Meteoric Core can be used with conventional HPLC as well as UHPLC.

Core-Shell columns with outstanding resolution for UHPLC & HPLC

Features

- Ultrafast analysis and excellent resolution
- Excellent peak shape on basic and coordination compounds
- Wide usable pH range
- Low column bleeding and ideal for LC/MS



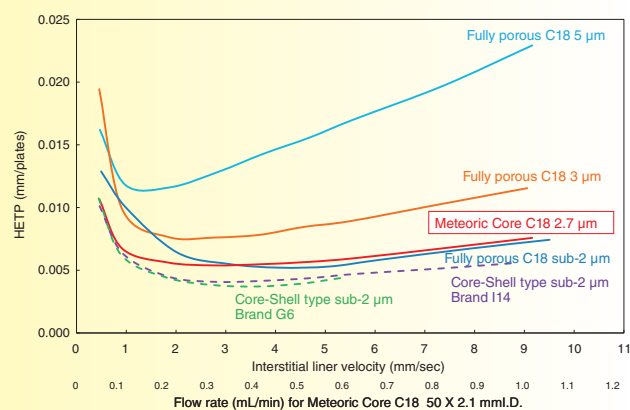
Meteoric Core
Particle image structure

Specifications

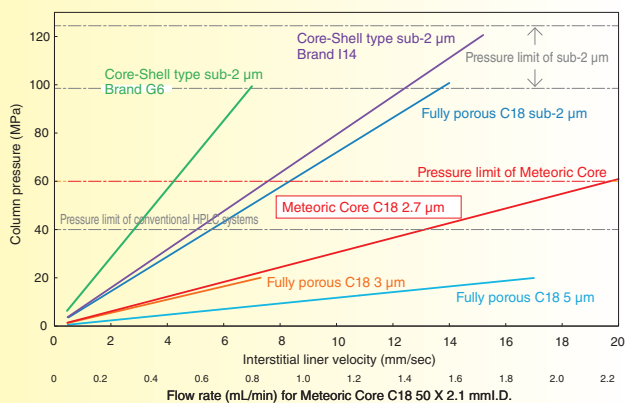
	Meteoric Core C18	Meteoric Core C18 BIO	Meteoric Core C8
Base	Core-Shell type silica gel		
Particle size (μm)	2.7		
Pore size (\AA)	80	160	80
Specific surface area (m^2/g)	150	90	150
Bonding	Trifunctional		
Carbon content (%)	7	5	5
Endcapping	Yes		
Usable pH range	1.5-10	1.5-10	1.5-9
USP classification	L1	L1	L7

Advantages of Core-Shell column packing material

Van Deemter Curves : Correlation between linear velocity and column efficiency



Column Pressure : Correlation between linear velocity and column backpressure

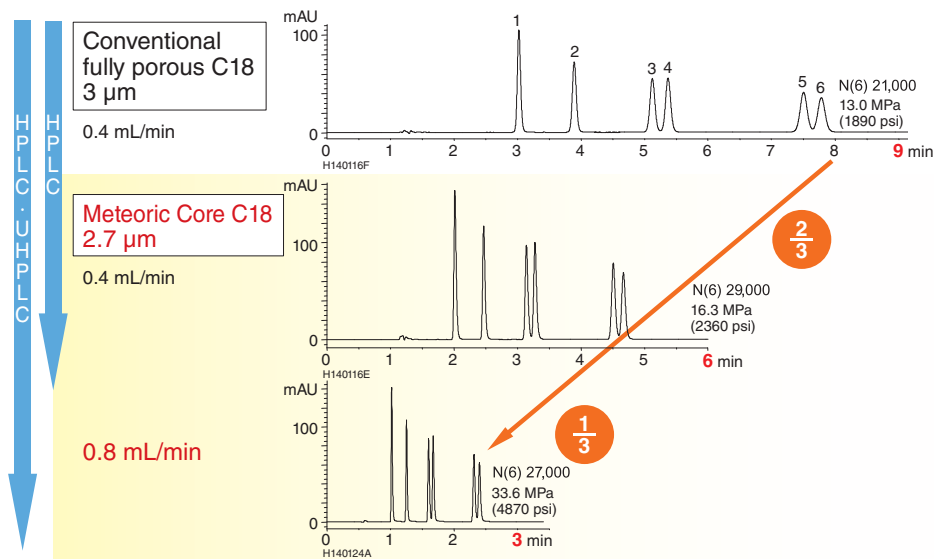


Meteoric Core C18 has high column efficiency which is almost equivalent to sub-2 μm columns over a wide range of flow rate. The operating pressure of Meteoric Core is one half to one fifth of sub-2 μm Core-Shell type columns. High throughput analysis using Meteoric Core could be expected even with longer length columns since the usable maximum flow rate of it is higher than competitors' sub-2 μm Core-Shell.

Column	: 50 X 2.0 or 2.1 mm.I.D.
Eluent	: acetonitrile/water (60/40)
Temperature	: 25°C
Sample	: butyl benzoate

Ultrafast analysis and excellent resolution

Ultrafast separation of Parabens: Typically difficult-to-separate geometric isomers



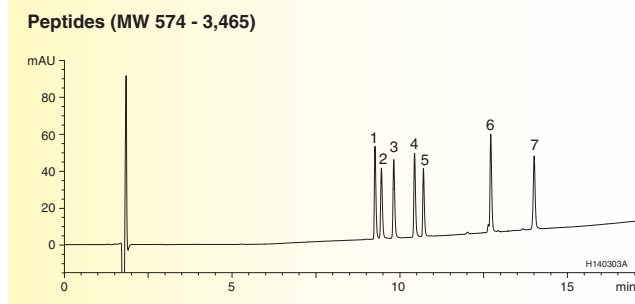
1. Methyl *p*-hydroxybenzoate
2. Ethyl *p*-hydroxybenzoate
3. Isopropyl *p*-hydroxybenzoate
4. Propyl *p*-hydroxybenzoate
5. Isobutyl *p*-hydroxybenzoate
6. Butyl *p*-hydroxybenzoate

Meteoric Core C18 can shorten the analysis time by two thirds compared to the conventional fully porous C18 column with the same column dimension and under the same analysis condition. Moreover, it maintains the theoretical plate number at a two times faster flow rate. It allows us to decrease analysis time by one thirds while maintaining resolution, and at an operating pressure less than 5000 psi.

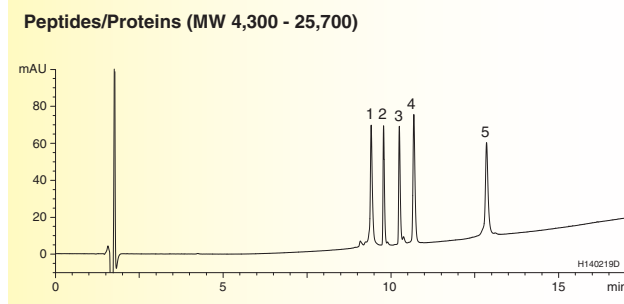
Column	: 150 X 3.0 mm.I.D.
Eluent	: acetonitrile/water (50/50)
Temperature	: 30°C
Detection	: UV at 270 nm

Peptide/Protein separation

Meteoric Core C18 BIO with wider pore size: Appropriate for separation of peptides/proteins whose molecular weight are up to 30,000



1. BAM-12P (MW 1,425)
2. [D-Ala²,Met⁶]-Enkephalinamide (MW 587)
3. Met-Enkephalin (MW 574)
4. [D-Ala²,Met⁶]-Enkephalin (MW 588)
5. α -Endorphin (MW 1,746)
6. γ -Endorphin (MW 1,859)
7. β -Endorphin (MW 3,465)



1. Cytochrome c (MW 12,400)
2. Insulin (bovine) (MW 5,700)
3. Amyloid β -protein (MW 4,300)
4. Lysozyme (MW 14,000)
5. α -Chymotrypsinogen A (MW 25,700)

Column	: Meteoric Core C18 BIO 2.7 μ m 150 X 2.1 mm I.D.
Eluent	: A) water/TFA (100/0.1) B) acetonitrile/TFA (100/0.1) 15-55%B (0-15 min), 55%B (15-17 min)
Flow rate	: 0.2 mL/min
Temperature	: 40°C
Detection	: UV at 220 nm
Pressure	: 14.9-16.1 MPa (2160-2330 psi)

Column	: Meteoric Core C18 BIO 2.7 μ m 150 X 2.1 mm I.D.
Eluent	: A) water/TFA (100/0.1) B) acetonitrile/TFA (100/0.1) 25-70%B (0-15 min), 70%B (15-17 min)
Flow rate	: 0.2 mL/min
Temperature	: 40°C
Detection	: UV at 220 nm
Pressure	: 12.8-16.1 MPa (1860-2330 psi)

Ordering Information -Columns-

Meteoric Core C18

Phase dimension	Column I.D. (mm)	Column length (mm)				
		30	50	75	100	150
80 Å 2.7 μ m	2.1	CAS08SQ7-03Q1PT	CAS08SQ7-05Q1PT	CAS08SQ7-L5Q1PT	CAS08SQ7-10Q1PT	CAS08SQ7-15Q1PT
	3.0	CAS08SQ7-0303PT	CAS08SQ7-0503PT	CAS08SQ7-L503PT	CAS08SQ7-1003PT	CAS08SQ7-1503PT
	4.6	CAS08SQ7-0346PT	CAS08SQ7-0546PT	CAS08SQ7-L546PT	CAS08SQ7-1046PT	CAS08SQ7-1546PT

Meteoric Core C18 BIO

Phase dimension	Column I.D. (mm)	Column length (mm)				
		30	50	75	100	150
160 Å 2.7 μ m	2.1	CAW16SQ7-03Q1PT	CAW16SQ7-05Q1PT	CAW16SQ7-L5Q1PT	CAW16SQ7-10Q1PT	CAW16SQ7-15Q1PT
	3.0	CAW16SQ7-0303PT	CAW16SQ7-0503PT	CAW16SQ7-L503PT	CAW16SQ7-1003PT	CAW16SQ7-1503PT
	4.6	CAW16SQ7-0346PT	CAW16SQ7-0546PT	CAW16SQ7-L546PT	CAW16SQ7-1046PT	CAW16SQ7-1546PT

Meteoric Core C8

Phase dimension	Column I.D. (mm)	Column length (mm)				
		30	50	75	100	150
80 Å 2.7 μ m	2.1	COS08SQ7-03Q1PT	COS08SQ7-05Q1PT	COS08SQ7-L5Q1PT	COS08SQ7-10Q1PT	COS08SQ7-15Q1PT
	3.0	COS08SQ7-0303PT	COS08SQ7-0503PT	COS08SQ7-L503PT	COS08SQ7-1003PT	COS08SQ7-1503PT
	4.6	COS08SQ7-0346PT	COS08SQ7-0546PT	COS08SQ7-L546PT	COS08SQ7-1046PT	COS08SQ7-1546PT