

Meteoric Core

UHPLC & HPLC Columns

Core-Shell Columns with Outstanding Resolution

- Ultra Fast Analysis and Excellent Resolution
- Excellent Peak Shape on Basic and Coordination Compounds



**CHROMATOGRAPHIC
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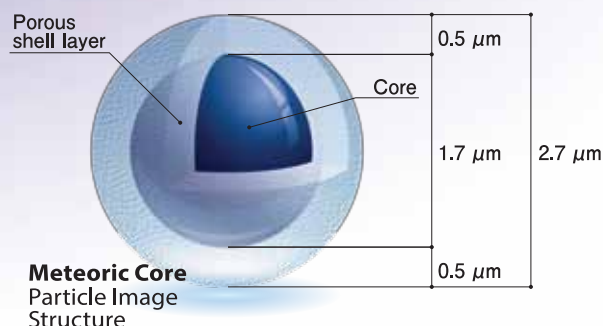
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Core-Shell Columns with Outstanding Resolution for UHPLC & HPLC

Meteoric Core

- Outstanding resolution for UHPLC and HPLC.
- Ideal for ultra fast and high resolution analysis.
- Low column bleed; ideal for LC/MS.
- Wide usable pH range.
- Excellent peak shape with basic and coordination compounds.
- Reduces backpressure in half compared to sub-2 micron columns with no loss of resolution.

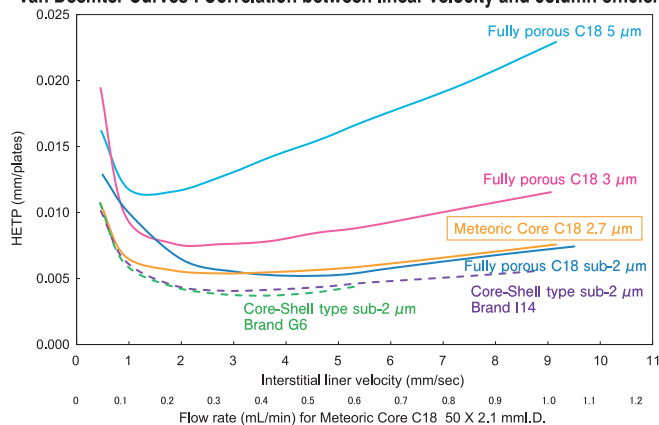


Specifications

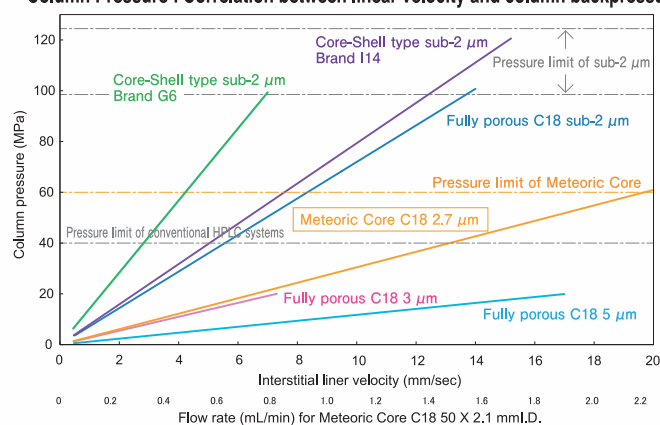
Name	Meteoric Core C18	Meteoric Core C18 BIO	Meteoric Core C8
Base particle	Core-Shell type silica gel		
Particle size (μm)	2.7		
Pore size (nm)	8	16	8
Specific surface area (m ² /g)	150	90	150
Bonding	Trifunctional		
Carbon content (%)	7	5	5
Endcapping	Yes		
pH range	1.5-10	1.5-10	1.5-9
USP classification	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

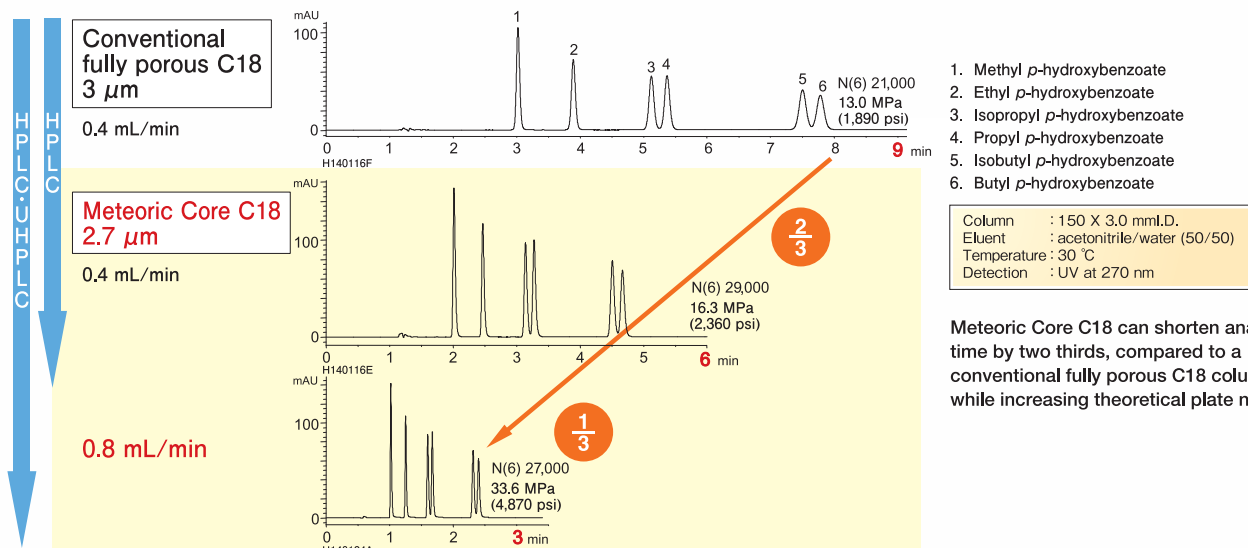


- Meteoric Core C18 has high column efficiency approaching that of sub-2 micron columns over a wide range of flow rates.
- The operating pressure of Meteoric Core is one half to one fifth of sub-2 micron columns.
- High throughput analysis can be expected, even with longer length columns.

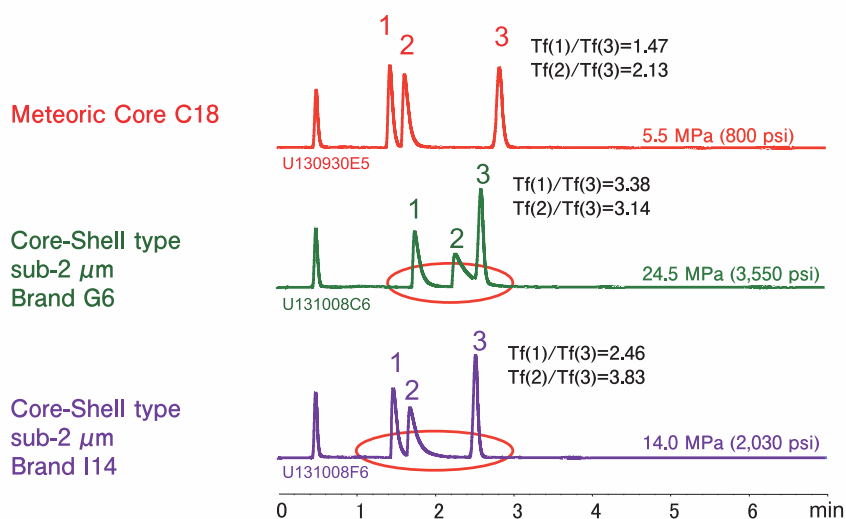
Column : 50 X 2.0 or 2.1 mm I.D.
 Eluent : acetonitrile/water (60/40)
 Temperature : 25 °C
 Sample : butyl benzoate

Ultrafast Analysis and Excellent Resolution

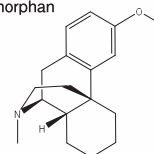
Ultrafast separation of Parabens: Typically difficult-to-separate geometric isomers



Excellent Peak Shape on Basic Compounds



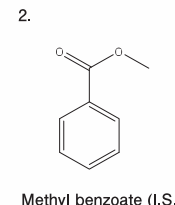
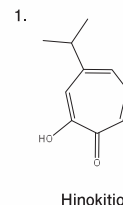
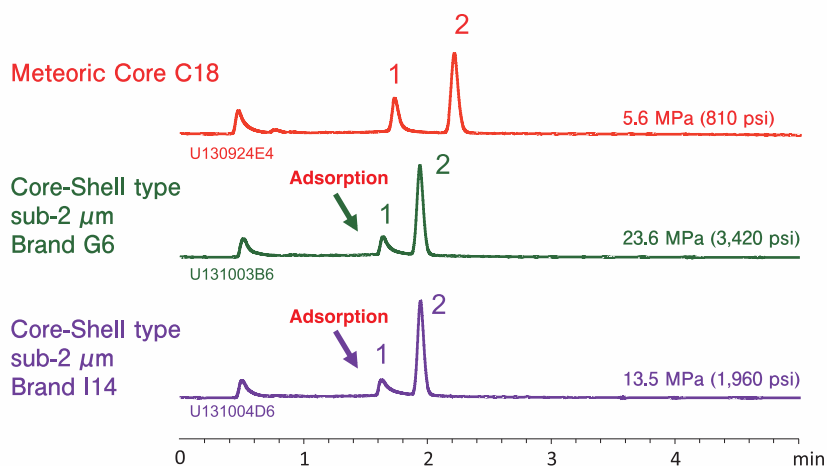
Dextromethorphan (Peak 2)



Column : 50 X 2.1 mm I.D.
Eluent : 20 mM KH_2PO_4 - K_2HPO_4 (pH 6.9)/acetonitrile (65/35)
Flow rate : 0.2 mL/min
Temperature : 40°C
Detection : UV at 235 nm
Sample : 1. Chlorpheniramine
2. Dextromethorphan
3. Propyl *p*-hydroxybenzoate (I.S.)

Meteoric Core C18 column is a high resolution column which provides excellent peak shapes for basic compounds (Peak 1 and 2) compared to sub-2 μ m Core-Shell columns. Chromatographers can expect ultrafast analysis of basic compounds with highly quantitative and sensitive analysis by using Meteoric Core C18.

Excellent Peak Shape on Coordination Compounds

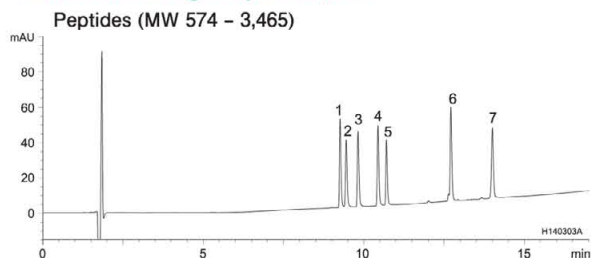


Column : 50 X 2.1 mm I.D.
Eluent : acetonitrile/0.1% phosphoric acid (40/60)
Flow rate : 0.2 mL/min
Temperature : 40°C
Detection : UV at 254 nm

Meteoric Core C18 is able to provide excellent peak shapes for coordination compounds which are often adsorbed onto a column, resulting from a strong interaction with impurities such as trace amount of metal ion. Meteoric Core is suitable for a quantitative analysis of coordination compounds.

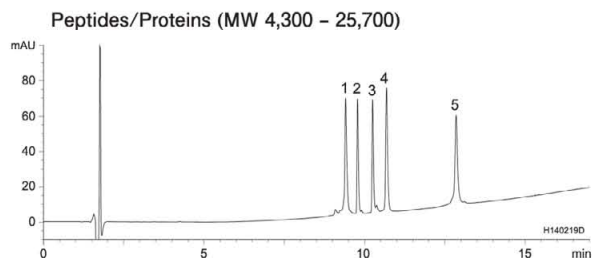
Peptide/Protein Separation

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



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

Column : Meteoric Core C18 BIO 2.7 μ m
150 X 2.1 mmID.
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 (2,160-2,330 psi)



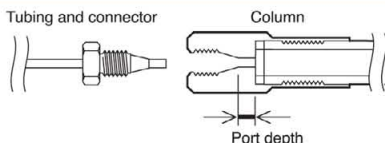
- | | |
|--|---|
| 1. Cytochrome c (MW 12,400) | 4. Lysozyme (MW 14,000) |
| 2. Insulin (bovine) (MW 5,700) | 5. α -Chymotrypsinogen A (MW 25,700) |
| 3. Amyloid β -protein (MW 4,300) | |

Column : Meteoric Core C18 BIO 2.7 μ m
150 X 2.1 mmID.
Eluent : A) water/TFA (100/0.1)
B) acetonitrile/TFA (100/0.1)
20:70%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 (1,860-2,330 psi)

Ordering Information

Particle size (μ m)	Column size inner diameter X length (mm)	Product number		
		Meteoric Core C18	Meteoric Core C18 BIO	Meteoric Core C8
2.7	2.1 X 30	CAS08SQ7-03Q1PT	CAW16SQ7-03Q1PT	COS08SQ7-03Q1PT
	2.1 X 50	CAS08SQ7-05Q1PT	CAW16SQ7-05Q1PT	COS08SQ7-05Q1PT
	2.1 X 75	CAS08SQ7-L5Q1PT	CAW16SQ7-L5Q1PT	COS08SQ7-L5Q1PT
	2.1 X 100	CAS08SQ7-10Q1PT	CAW16SQ7-10Q1PT	COS08SQ7-10Q1PT
	2.1 X 150	CAS08SQ7-15Q1PT	CAW16SQ7-15Q1PT	COS08SQ7-15Q1PT
	3.0 X 30	CAS08SQ7-0303PT	CAW16SQ7-0303PT	COS08SQ7-0303PT
	3.0 X 50	CAS08SQ7-0503PT	CAW16SQ7-0503PT	COS08SQ7-0503PT
	3.0 X 75	CAS08SQ7-L503PT	CAW16SQ7-L503PT	COS08SQ7-L503PT
	3.0 X 100	CAS08SQ7-1003PT	CAW16SQ7-1003PT	COS08SQ7-1003PT
	3.0 X 150	CAS08SQ7-1503PT	CAW16SQ7-1503PT	COS08SQ7-1503PT
	4.6 X 30	CAS08SQ7-0346PT	CAW16SQ7-0346PT	COS08SQ7-0346PT
	4.6 X 50	CAS08SQ7-0546PT	CAW16SQ7-0546PT	COS08SQ7-0546PT
	4.6 X 75	CAS08SQ7-L546PT	CAW16SQ7-L546PT	COS08SQ7-L546PT
	4.6 X 100	CAS08SQ7-1046PT	CAW16SQ7-1046PT	COS08SQ7-1046PT
	4.6 X 150	CAS08SQ7-1546PT	CAW16SQ7-1546PT	COS08SQ7-1546PT

Consideration of connector and column endfitting



The end of the product number	Port depth	Style of endfitting
PT	2 mm	UPLC compatible (Parker) style

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