

Polymer-coating type core-shell technology



CAPCELL CORE

Core-shell, the new particle geometry of HPLC

Since 1987 Shiseido has been pursuing the best LC separation by creating new chemistry on the surface of powdery materials.

Fusing Shiseido's chemistry and a new particle geometry together, the beginning of new LC separation is ready to present!
Polymer-coating type Core-shell technology

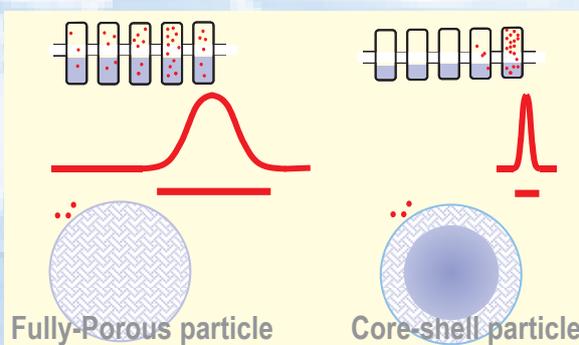


CAPCELL CORE

Polymer-coated core-shell particle



High efficiency at fast analysis



Shiseido's challenge,
Begin the Beginning !

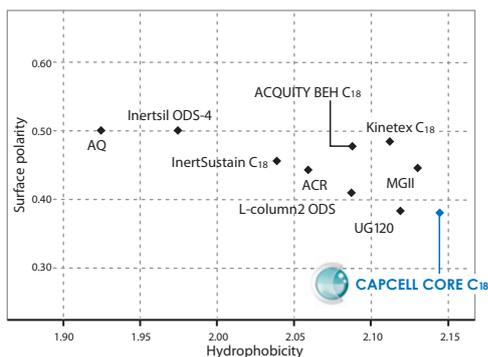
CAPCELL CORE C₁₈

Polymer-coating type core-shell column

CAPCELL CORE is a polymer-coating type core-shell column of 2.7- μm particle with 1.7- μm solid core and 0.5- μm porous layer. CAPCELL CORE provides high-speed and improved separation in UHPLC as well as conventional HPLC.

Characteristics

Function group	Micro pore diameter (nm)	Particle size (μm)	Specific surface area (m^2/g)	C%	Operational pH range	Pressure resistance (MPa)
C ₁₈	9	2.7	150	7	1.5 - 10	60

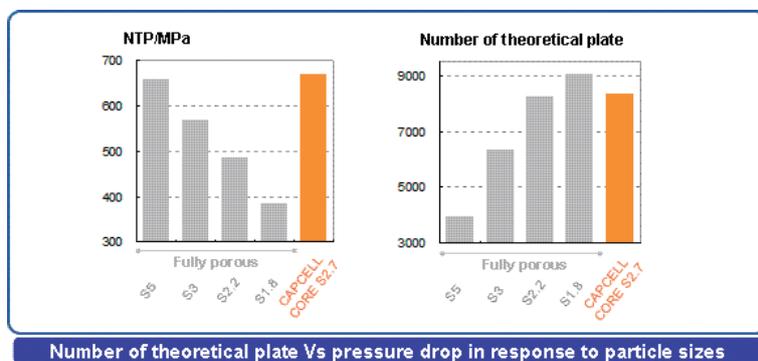


Evolution of polymer coating technology in core-shell

CAPCELL CORE is a column with minimized undesirable second effect of the silanols by applying polymer coating on the surface of core-shell base material. CAPCELL CORE phase is developed by aiming at full play to high performance of separation derived from the unique structure of core-shell.

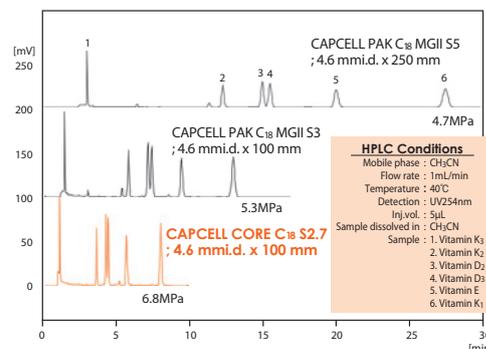
High efficient separation with lower back pressure

core-shell type CAPCELL CORE overcome the separation impedance of sub 2- μm porous particles with similar high efficiency under a lower back pressure.



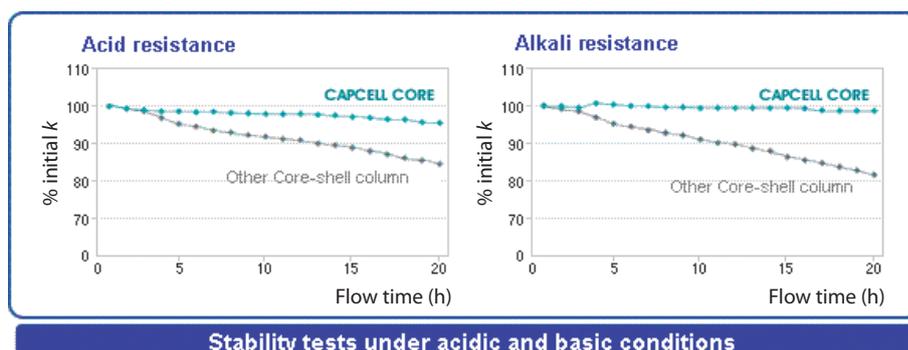
High-speed high-efficient analysis

CAPCELL CORE C₁₈ is suggested the improved way to gain the highest separation efficiency at fast analysis even in conventional HPLC.



Excellent stability under acidic and basic conditions (pH1.5-10)

Polymer coating technology applied on Capcell Core leads to an excellent stability under acid and basic conditions. Clear differences from other core-shell products can be observed

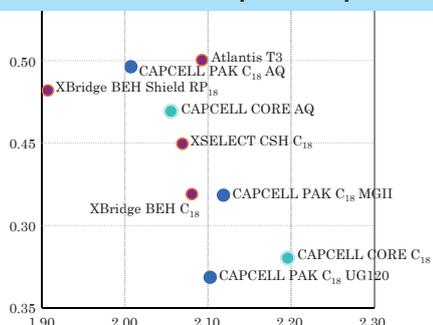


CAPCELL CORE AQ

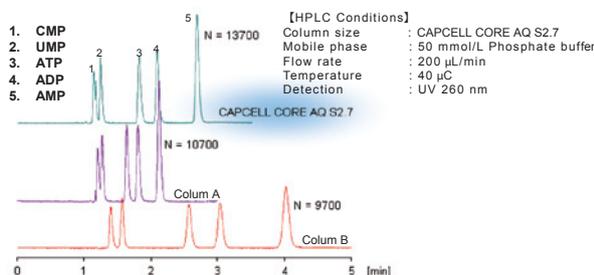
CAPCELL CORE AQ is C₂₇ column developed for improved retention of high hydrophilic compounds under 100% aqueous mobile phase at fast analysis.

Function group	Micro pore diameter (nm)	Particle size (μm)	Specific surface area (m ² /g)	C%	Operational pH range	Pressure resistance (MPa)
C ₂₇	16	2.7	90	4	2-10	60

Characterization ~Optimized parameter~



Well-balanced and efficient separation under 100% buffer



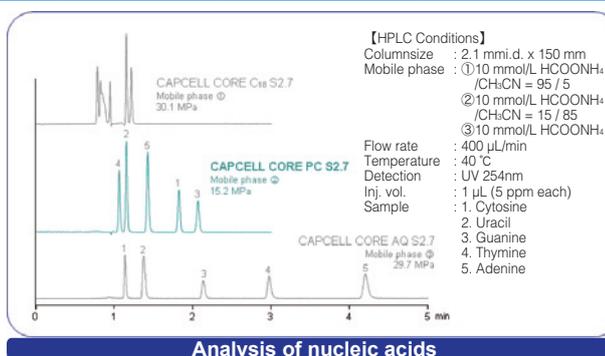
CAPCELL CORE PC

CAPCELL CORE PC is developed by sophisticated bonding of phosphorylcholine group (PC). The PC column provides HILIC-mode retention of very polar compounds.

Function group	Micro pore diameter (nm)	Particle size (μm)	Specific surface area (m ² /g)	C%	Operational pH range	Pressure resistance (MPa)
PC	9	2.7	150	—	2-7.5	60

Synergy of PC technology and CAPCELL CORE

CAPCELL CORE PC retains high hydrophilic compounds under organic solvent-rich mobile phase where C₁₈ has no retention. Core-shell type PC is a good alternative for UHPLC (sub 2-μm) HILIC mode and provides improved LC-MS for high hydrophilic compounds.



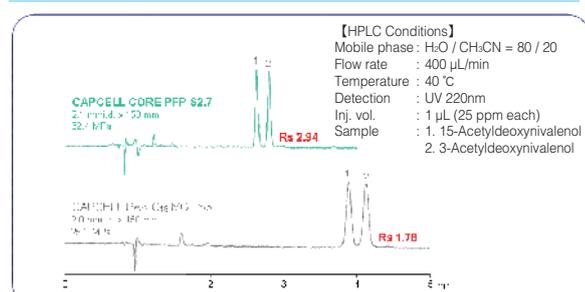
Analysis of nucleic acids

CAPCELL CORE PFP

CAPCELL CORE PFP is a novel phase with function group of pentafluorophenyl group. It provides improved separation capacity by specific retention of fluorine compounds and position isomers.

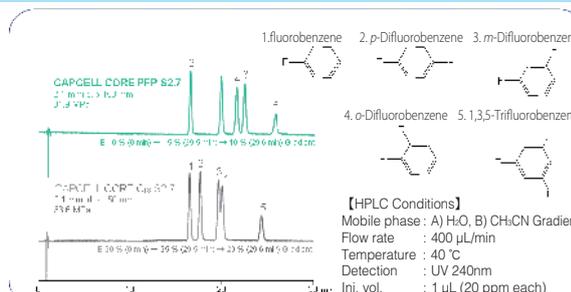
Function group	Micro pore diameter (nm)	Particle size (μm)	Specific surface area (m ² /g)	C%	Operational pH range	Pressure resistance (MPa)
PFP	9	2.7	150	5	2-9	60

Specific selectivity of position isomer in UHPLC



Separation of position isomer

Best choice for analysis of fluorine compounds



Analysis of fluorine compounds

