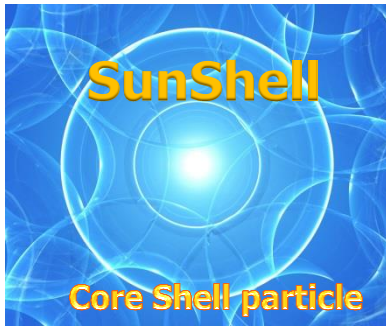


SunShell C18, 5 μm

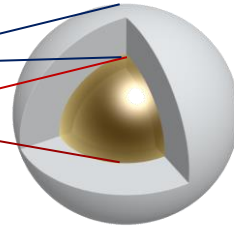
Core Shell Column

Featurer

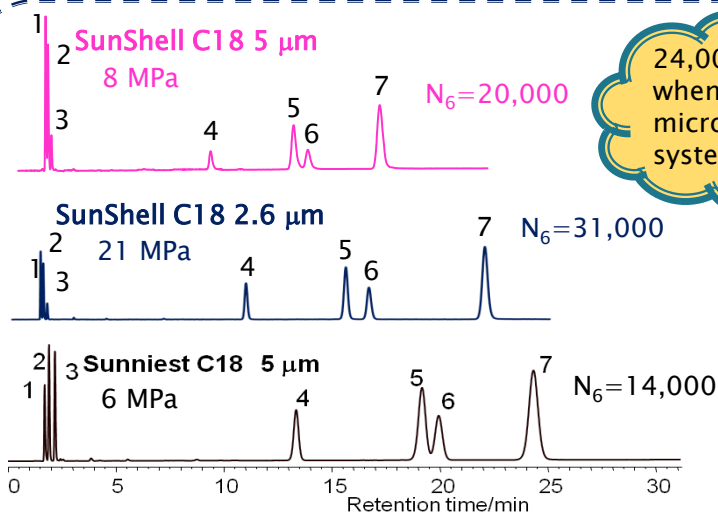
- ✓ Same performance as 3 μm porous particle, but back pressure of 5 μm
- ✓ 60% of retention time to compare with porous particle, while 90% of retention factor
- ✓ Same bonding technology as 2.6 μm SunShell
- ✓ An excellent peak shape for basic, acidic and metal chelating compounds



Property of 5 μm SunShell	
Particle size	4.6 μm
Thickness of porous layer	0.6 μm
Diameter of core	3.4 μm
Specific surface area	90 m ² /g
Pore diameter	9 nm



Comparison of retention using HPLC



24,000 plate when semi-micro HPLC system is used.

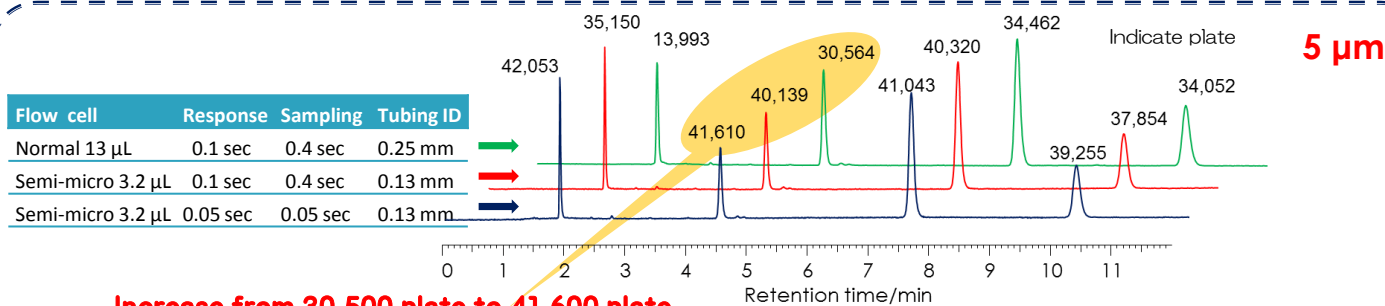
Column dimension: 150 x 4.6 mm
Mobile phase : Methanol/water=75/25
Flow rate: 1.0 mL/min
Temperature: 40°C
Sample:
1) Uracil
2) Caffeine
3) Phenol
4) Butylbenzene
5) o-Terphenyl
6) Amylbenzene
7) Triphenylene
Applied HPLC :
Hitachi LaChrom ELITE
(Inner diameter of tubing: 0.25mm)



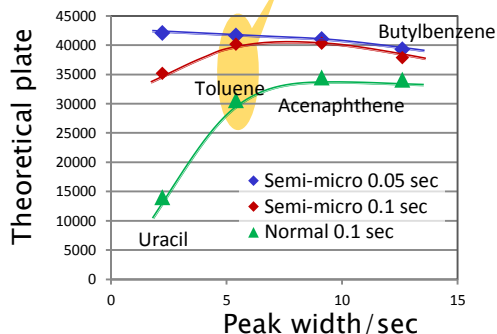
	Fully porous silica Sunniest C18, 5 μm		Core shell silica SunShell C18, 2.6 μm		Core shell silica SunShell C18, 5 μm	
Specific surface area	340 m ² /g		150 m ² /g		90 m ² /g	
	Retention time (t _R)	Retention factor (k)	Retention time (t _R)	Retention factor (k)	Retention time (t _R)	Retention factor (k)
1) Uracil	1.70	0	1.34	0	1.30	0
2) Caffeine	1.90	0.12	1.46	0.09	1.41	0.08
3) Phenol	2.17	0.28	1.65	0.23	1.57	0.21
4) Butylbenzene	13.35	6.85	10.87	7.11	8.93	5.87
5) o-Terphenyl	19.19	10.29	15.49	10.56	12.76	8.82
6) Amylbenzene	19.96	10.74	16.56	11.36	13.43	9.33
7) Triphenylene	24.35	13.32	21.95	15.38	16.76	11.89
Relative value of Amylbenzen	100%	100%	83%	106%	67%	87%

Retention time is 67%.
Retention factor is 87%.
Almost same retention factor to compare with porous C18.

Comparison between Semi-micro HPLC and HPLC



Increase from 30,500 plate to 41,600 plate



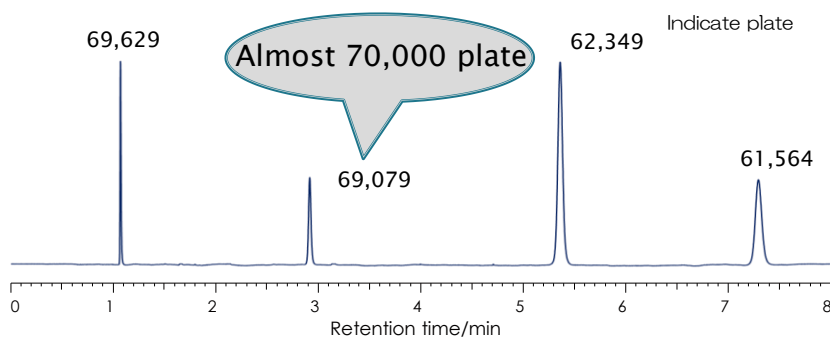
Column: SunShell C18, 5 μm, 250 x 4.6 mm
 Mobile phase: CH₃CN/H₂O= 70/30
 Flow rate: 1.0 mL/min,
 Temperature: 40 °C
 Pressure: 6.7 MPa
 Detection: UV@250 nm
 Sample: 1 = Uracil
 2 = Toluene
 3 = Acenaphthene
 4 = Butylbenzene



HPLC: Hitachi LaChrom ELITE

SunShell C18, 2.6 μm

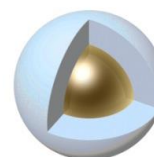
Performance of 250 x 4.6 mm column packed with 2.6 μm



Column: SunShell C18, 2.6 μm, 250 x 4.6 mm
 Mobile phase: CH₃CN/H₂O= 70/30
 Flow rate: 1.8 mL/min
 Temperature: 25 °C
 Pressure: 45 MPa
 Detection: UV@250 nm
 Sample: 1 = Uracil, 2 = Toluene,
 3 = Acenaphthene, 4 = Butylbenzene
 UHPLC: Jasco X-LC

Ordering information of SunShell C18

Column	Catalog number
SunShell C18, 5 μm 150 x 4.6 mm	CB3471
SunShell C18, 5 μm 250 x 4.6 mm	CB3481
SunShell C18, 2.6 μm 250 x 4.6 mm	CB6481



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