

SunShell PFP&C18 2.6 μm

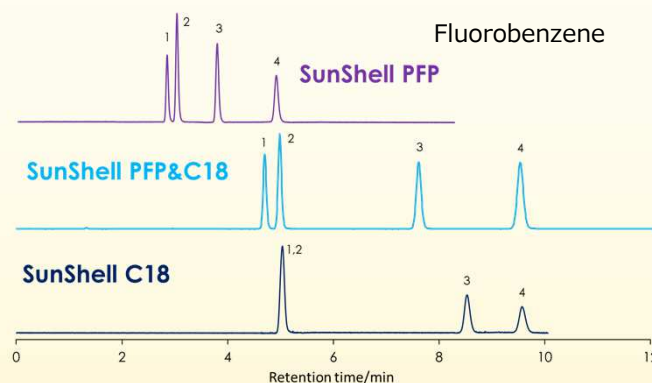
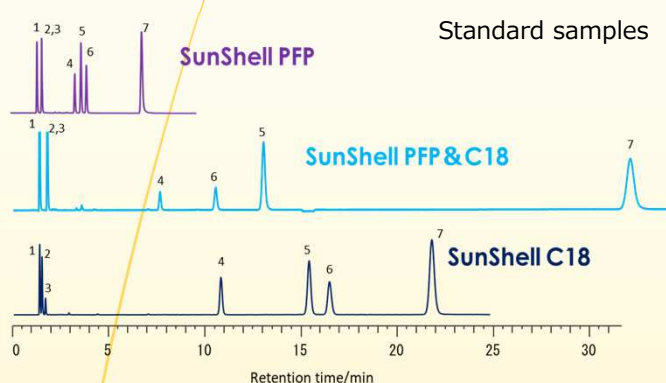
Core Shell Particle

Sunniest PFP&C18 5 μm

Totally porous particle

**Add C18 hydrophobicity to PFP separation!
Increased retention and improved durability**

Comparison of separation

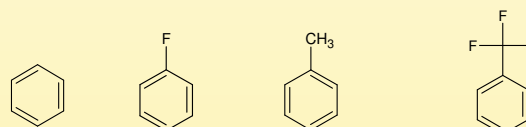


Column dimension: 4.6 x 150 mm
Mobile phase: CH₃OH/H₂O=75/25
Flow rate: 1.0 mL/min
Temperature: 40 °C
Sample: 1 = Uracil, 2 = Caffeine, 3 = Phenol, 4 = Butylbenzene
5 = o-Terphenyl, 6 = Amylbenzene, 7 = Triphenylene

Column: SunShell PFP 2.6 μm , 4.6 x 150 mm
SunShell PFP&C18 2.6 μm , 4.6 x 150 mm
SunShell C18 2.6 μm , 4.6 x 150 mm
Mobile phase: Methanol/water=60/40
Flow rate: 1.0 mL / min
Temperature: 40 °C
Detection: UV@250 nm

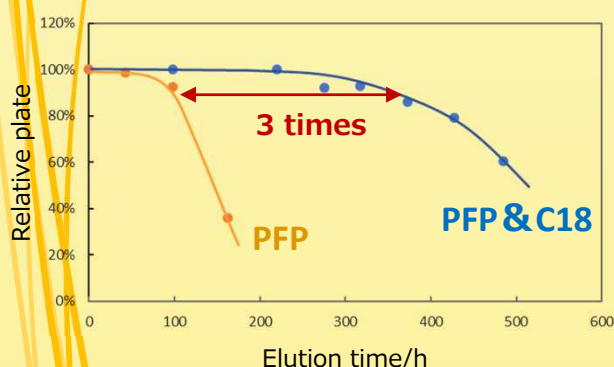
Sample:
1 = Benzene, 2 = Fluorobenzene, 3 = Toluene, 4 = α,α,α -Trifluorotoluene

	Hydrogen bond (Caffeine/Phenol)	Hydrophobicity (Amylbenzene/Butylbenzene)	Steric selectivity (Triphenylene/o-Terphenyl)
PFP	1.00	1.31	2.38
PFP&C18	1.00	1.47	2.64
C18	0.39	1.60	1.46



Compared to PFP, PFP & C18 has the same stereoselectivity, but the hydrophobicity is greatly increased and the retention time is extended. PFP & C18 has achieved the same separation as that of PFP, such as the separation of fluorobenzenes.

Stability test



Conditions for durability testing

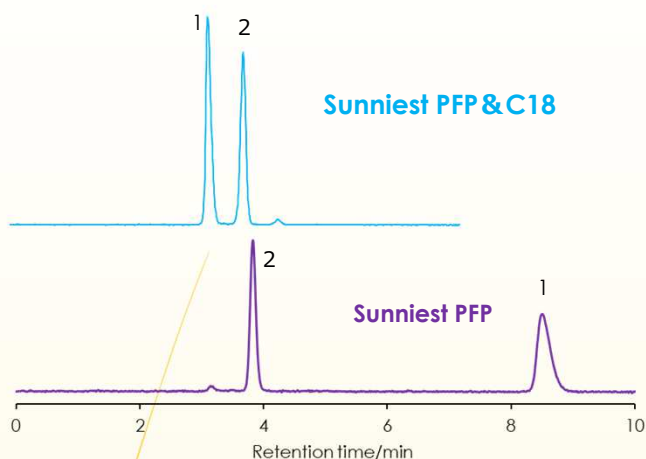
Column: Sunniest PFP&C18 5 μm , 2.1x150 mm
Sunniest PFP 5 μm , 2.1x150 mm
Mobil phase: CH₃OH/20mM PB pH7.0=70/30
Flow rate: 0.2 mL/min
Temperature: 40 °C

Conditions for measuring theoretical plates

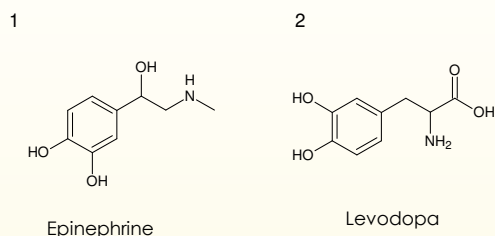
Column: PFP&C18 5 μm , 2.1x150 mm
PFP 5 μm , 2.1x150 mm
Mobil phase: Acetonitrile/water=70/30
Acetonitrile/water=60/40
Flow rate: 0.2 mL/min
Temperature: 40 °C
Sample: Acenaphthene

Due to the increased hydrophobicity of the surface, the durability of PFP & C18 is approximately three times that of conventional PFP.

Comparison of retention times for highly polar compounds



Column: Sunniest PFP&C18, PFP 5 μm , 150 x 4.6 mm
 Mobile phase: 12.5 mM Ammonium Formate (pH3)
 Flow rate: 1.0 mL/min
 Temperature: 25 $^{\circ}\text{C}$
 Detection: UV@260nm



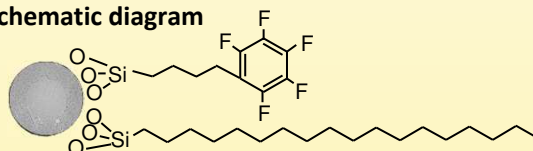
In the separation of highly polar compounds such as catecholamines, the selectivity of PFP and PFP & C18 changes greatly, and PFP tends to be more retained.

◆ Specification of SunShell PFP&C18, Sunniest PFP&C18

	Core shell silica and totally porous silica				Bonded phase					
	Pore size (μm)	Core diameter (μm)	Pore diameter (nm)	Specific surface area (m^2/g)	Carbon loading (%)	Stationary phase	USP L line	End-capping	Maximum pressure	pH range
SunShell PFP&C18	2.6 μm	1.6 μm	9 nm	150 m^2/g	6%	Pentafluorophenyl + C18	L43	TMS end-capping	60 MPa	2 - 8
Sunnjest PFP&C18	5 μm	0 μm	12 nm	340 m^2/g	14%	Pentafluorophenyl + C18	L43	TMS end-capping	30 MPa	2 - 8

※For the maximum operating pressure, the value described in the test report of each column has priority over the above value.

PFP&C18 stationary phase schematic diagram



◆ Ordering information

	Inner diameter (mm)	2.1	3.0	4.6	10	20	USP category
SunShell PFP&C18, 2.6 μm	Length (mm)	Catalog No.	Catalog No.	Catalog No.	Catalog No.	Catalog No.	L43
	30	CV6931	CV6331	CV6431	-----	-----	
	50	CV6941	CV6341	CV6441	-----	-----	
	75	CV6951	CV6351	CV6451	-----	-----	
	100	CV6961	CV6361	CV6461	-----	-----	
150	CV6971	CV6371	CV6471	-----	-----		
	Inner diameter (mm)	2.1	3.0	4.6	10	20	USP category
Sunnjest PFP&C18, 5 μm	Length (mm)	Catalog No.	Catalog No.	Catalog No.	Catalog No.	Catalog No.	L43
	50	EV3241	EV3341	EV3441	-----	-----	
	100	EV3261	EV3361	EV3461	-----	-----	
	150	EV3271	EV3371	EV3471	-----	-----	
	250	EV3281	EV3381	EV3481	EV3781	EV3881	

Manufacturer

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