HPLC column

Sunrise C18 Octadecyl group

Sunrise C28 Octacocyl group

Sunrise PhE Phenethyl group

NEW

Fully end-capped stationary phase

Name	Stationary phase	Carbon content	Ligand density	Particle size
C18 Octadecyl		15%	2.1 μmol/m²	3 μm, 5 μm
C28 Octacocyl		18%	1.7 μmol/m²	3 μm, 5 μm
PhE Phenethyl		11%	3.4 μmol/m²	5 μm

Silica support
Surface area : 340 m²/g
Pore volume : 1.0 mL/g
Pore diameter : 12 nm

End-capping
Trimethylsilyl group (TMS)

＊ Deactivation with both silanol activity control technique and full end-capping!

C18 :

■ Conventional C18 phase with full end-capping

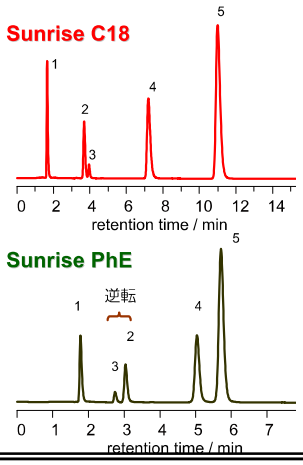
C28 :

■ A long alkyl chain improves both separation of fat-soluble compounds to compare with C18 phase and an excellent reproducibility in retention under high aqueous conditions.
■ Furthermore, a suitable ligand density of C28 allows to be obtained a shape peak shape even if more than 50% aqueous mobile phase is used.
■ Different selectivity

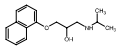
PhE :

■ Interaction based with π-electron such as π-π interaction
■ π-electron also interacts with a polar site of a compound, so that phenyl phase improves separation of polar compounds. Ethylene chain between silica surface and phenyl group allows a movable sphere of a phenyl group to be wide. A chain with more than three carbons shows more hydrophobic interaction, so that π-electron interaction decreases relatively.
■ Phenethyl (PhE) group is a suitable phenyl phase.

■ Separation of Basic compounds



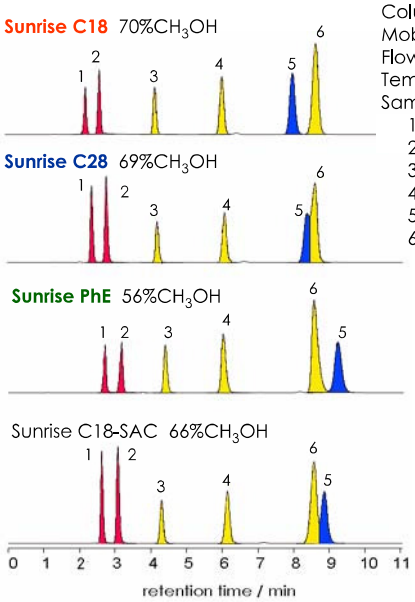
Column size: 4.6x150 mm
Mobile phase:
80/20=CH_3OH/25mM P.B. pH7.5
Flow rate: 1.0 mL/min
Temperature: 40 °C
Sample: 1 = uracil
2 = propranolol



3 = toluene
4 = nortriptyline

5 = amitriptyline

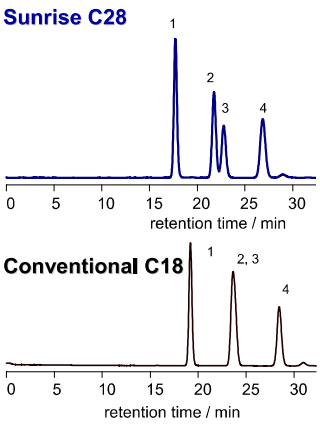
■ Comparison of stationary phases



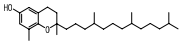
Column size: 4.6x150 mm
Mobile phase:CH_3OH/H_2O
Flow rate: 1.0 mL/min
Temperature: 40 °C
Sample:
1 = methylparaben
2 = ethylparaben
3 = benzene
4 = toluene
5 = naphthalene
6 = ethylbenzene

■ Separation of Vitamin E

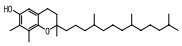
Isomer can be separated by C28



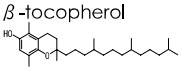
Column size: 4.6x250 mm
Mobile phase: 97/3=CH_3OH/H_2O
Flow rate: 1.0 mL/min
Temperature: 25 °C
Detection: UV at 295nm
Sample: 1=δ-tocopherol



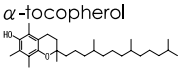
2=γ-tocopherol



3=β-tocopherol



4=α-tocopherol



＊ Ordering information

Inner diameter [mm]	Length [mm]	Sunrise C18, 5µm Cat. No.	Sunrise C18, 3µm Cat. No.	Sunrise C28, 5µm Cat. No.	Sunrise C28, 3µm Cat. No.	Sunrise PhE, 5µm Cat. No.
2.0	50	SB3241	SB2241	ST3241	ST2241	SP3241
	75	—	SB2251	—	ST2251	—
	100	SB3261	SB2261	ST3261	ST2261	SP3261
	150	SB3271	SB2271	ST3271	ST2271	SP3271
4.6	10	SB3411	SB2411	ST3411	ST2411	SP3411
	50	SB3441	SB2441	ST3441	ST2441	SP3441
	75	—	SB2451	—	ST2451	—
	100	SB3461	SB2461	ST3461	ST2461	SP3461
	150	SB3471	SB2471	ST3471	ST2471	SP3471
	250	SB3481	—	ST3481	—	SP3481
10.0	250	SB3781	—	ST3781	—	SP3781
20.0	250	SB3881	—	ST3881	—	SP3881