

Cogent Bidentate C18™

Highly Retentive

Cogent Phase	Particle Size (µm)	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load (%)	Endcapped	Optimum pH Range	Recommended Max. Temp. (°C)	USP Code
Bidentate C18	4	100	390	18-19	No	2.0 – 10.0	80	L1
Bidentate C18 2.6™	2.2	120	340	20	No	2.0 – 10.0	80	L1

For further details on 2.6 columns, please see page 25. For ordering information, see page 30.

Using proprietary bonding technology, the straight chain C18 hydrocarbon is bonded directly to the TYPE-C silica-hydride surface at two separate points of attachment with direct silicon-carbon bonds. This Si-C bond is virtually indestructible and confers great stability and longevity to these columns. This unique bonding technology and subsequent lack of silanols eliminates the need for endcapping thus making the columns even more durable.

Columns are suitable for use with mobile phases containing from 100% water to 100% organic solvent, although their greatest merits and most common usage are in reversed-phase separations. This is a very hydrophobic phase, showing increased retention compared to Type B silica bonded C18 phases. The use of 100% aqueous buffers can give excellent selectivity for highly polar organic acids and bases without the need for ANP.

Cogent Bidentate C18 can be considered as a laboratory workhorse column since it is so stable and the column lifetime is considerably greater than other ordinary C18 columns. It is ideal for generic or USP methods which specify the use of a C18 (or USP L1) column.

These methods can be transferred to Cogent Bidentate C18 without requiring revalidation of a GMP method. Note that a higher concentration of organic solvent may be required if it is desired to achieve retention data comparable to a non TYPE-C C18 column.

Figure 6.

Bidentate C18

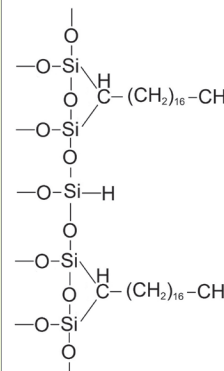
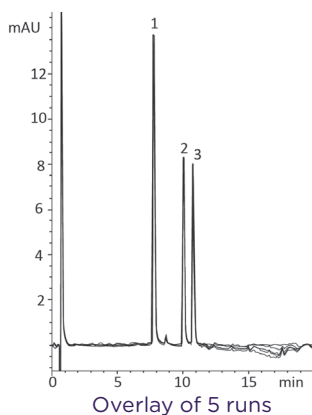


Figure 7.



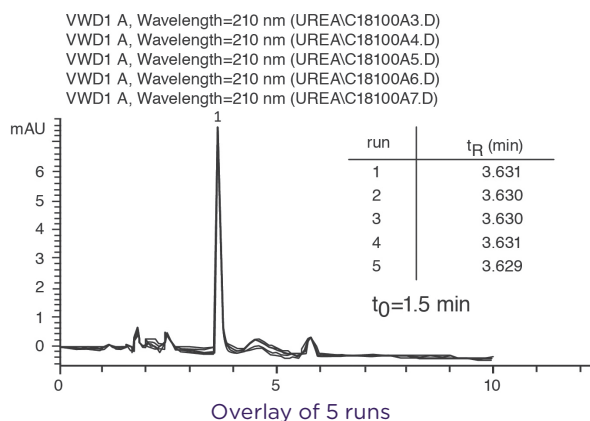
Method Conditions

Column: Cogent Bidentate C18, 2.2µm, 120Å
Catalog No.: 40218-05P-2
Dimensions: 2.1 x 50mm
Mobile Phase: A: DI H₂O / 0.1% formic acid (v/v)
 B: Acetonitrile / 0.1% formic acid (v/v)

Gradient:	time (min.)	%B
	0	10
	1	10
	15	30
	16	30
	17	10

Post Time: 3 min
Injection vol.: 0.2µL
Flow rate: 0.3mL/min
Detection: UV 254nm (Perkin-Elmer instrument)
Peaks: 1. Eriocitrin
 2. Naringin
 3. Diosmin

Figure 8.



Method Conditions

Column: Cogent Bidentate C18, 4µm, 100Å
Catalog No.: 40018-15P
Dimensions: 4.6 x 150mm
Mobile Phase: A: DI water (ISOCRATIC Run: 100% A)
Injection vol.: 10µL
Flow rate: 0.5mL/min
Detection: UV 210nm
Peak/Sample: Urea (1mg/mL in DI water)

