

# Cogent Silica-C™

## Unmodified & For Normal Phase

Cogent Phase	Particle Size (µm)	Pore Size (Å)	Surface Area (m <sup>2</sup> /g)	Carbon Load (%)	Endcapped	Optimum pH Range	Recommended Max. Temp. (°C)	USP Code
Silica-C	4	100	390	0	No	2.0 - 7.0	60	L3
Silica-C 2.6™	2.2	120	340	0	No	2.0 - 7.0	60	L3

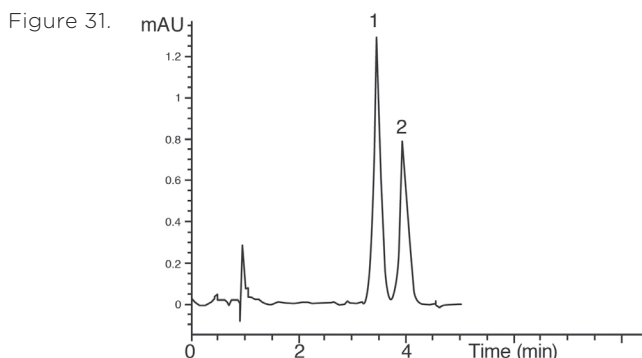
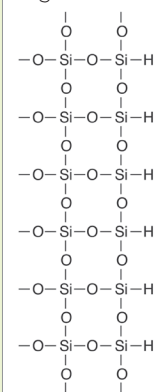
For further details on 2.6 columns, please see page 25. For ordering information, see page 32.

Cogent Silica-C is an un-bonded phase with a silica-hydride surface. It is manufactured to be completely free of carbon and will adsorb and desorb mobile phase solvents very differently from ordinary silica, resulting in significant benefits to the chromatographer.

As these columns have virtually no silanols remaining (less than 2%), they do not have a strong association with water and will not have the expected hydration shell of other silica based columns (see Figure 3 on page 7). This enables them to be used for normal-phase HPLC without having to attempt to control the moisture contents of the solvents, which is a great feature leading to much more reproducibility even when you transfer the method. In addition, Cogent Silica-C columns last longer and equilibrate much faster. Gradient analyses can be performed more easily with Cogent Silica-C columns than with ordinary silica columns.

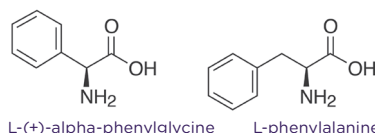
Cogent Silica-C exhibits good retention of very polar compounds. The phase is an excellent choice for normal-phase and preparative chromatography, because it produces unique selectivity and is extremely stable. In addition to normal-phase, unbonded Cogent Silica-C columns can be used in the ANP mode for the analysis of polar compounds. These columns are therefore more versatile and more convenient than 'ordinary' silica columns.

Figure 30.



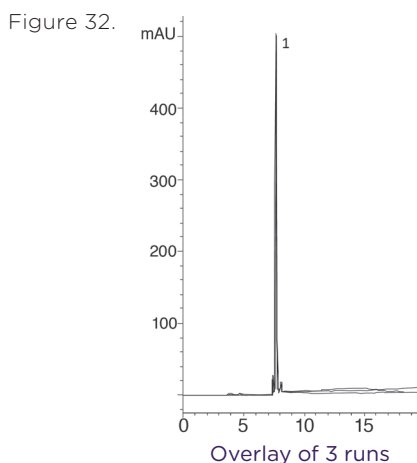
### Method Conditions

Column: Cogent Silica-C, 4µm, 100Å  
 Catalog No.: 40000-75P  
 Dimensions: 4.6 x 75mm  
 Mobile Phase: A: DI water + 0.1% formic acid  
 B: acetonitrile + 0.1% formic acid  
 Mobile Phase: 80%B/20%A



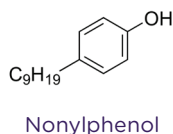
Injection vol.: 2µL  
 Flow rate: 1.0mL/minute  
 (t<sub>0</sub> = 0.85 min)  
 Detection: 254nm UV  
 Sample Matrix: 0.3mg/mL of each sample dissolved in 50% acetonitrile/50%

Figure 31 illustrates applicability of Cogent Silica-C in the separation of two underivatized aromatic amino acids by ANP, whereas Figure 32 shows the analysis of nonylphenol and minor isomers by normal-phase HPLC.



### Method Conditions

Column: Cogent Silica-C, 4µm, 100Å  
 Catalog No.: 40000-10P  
 Dimensions: 4.6 x 100mm  
 Mobile Phase: A: Ethyl Acetate  
 B: Hexane



Gradient:	time (min.)	%B
	0	100
	4	100
	19	90
	20	100

Post Time.: 3 min  
 Injection vol.: 1µL  
 Flow rate: 1.0mL/min  
 Detection: UV 277nm  
 Sample: Nonylphenol reference standard dissolved in a hexane diluent