

Cogent Diamond Hydride™

For Polar & Bio-active Compounds

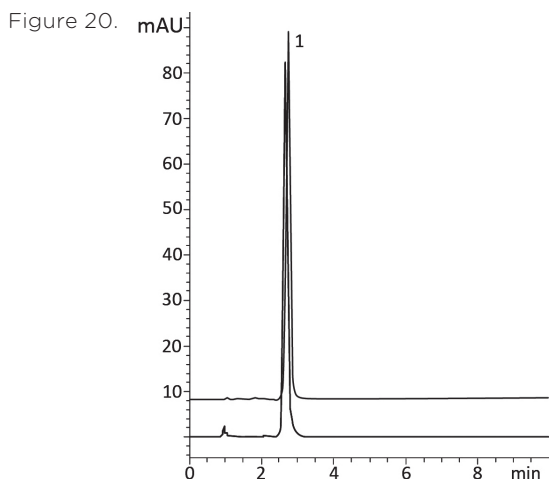
Cogent Phase	Particle Size (µm)	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load (%)	Endcapped	Optimum pH Range	Recommended Max. Temp. (°C)	USP Code
Diamond Hydride	4	100	390	2	No	2.5 - 7.5	80	N/A
Diamond Hydride 2.6™	2.2	120	340	2	No	2.5 - 7.5	80	N/A

For further details on 2.6 columns, please see page 25. For ordering information, see page 31.

Cogent Diamond Hydride columns have a silica-hydride surface similar to other TYPE-C silica phases, but uniquely have a very small amount of carbon (< 2%) impregnated on the surface that adjusts the surface to an important level affecting the adsorption and desorption of solvent, creating excellent peak shapes and phenomenal precision run to run for many types of compounds.

This column is a popular choice of scientists working in metabolomics and bioanalysis with LC-MS for compounds such as un-derivatized amino acids, organic acids, carbohydrates and very polar small isobaric molecules, as well as polar and non-polar peptides. Precise methods are easily developed even with complex sample matrices including biological fluids such as plasma, urine, saliva and other bio matrices. The use of very low salt required to elute compounds makes this column also a favoured choice for prep and process methods.

Cogent Diamond Hydride is designed mainly for Aqueous Normal-Phase (ANP) separations. This phase has high hydrophilic retention and shows excellent peak shape over a wide range of polar compounds that is unsurpassed by any column on the market.



Method Conditions

Column: Cogent Diamond Hydride, 4µm, 100Å
Catalog No.: 70000-7.5P
Dimensions: 4.6 x 75mm
Mobile Phase: Acetonitrile/ 0.1% formic acid
Injection vol.: 1µL
Flow rate: 1.0mL/min
Detection: 205nm
Sample: 100mg/L acrylamide in mobile phase diluent
Peak: 1. Acrylamide

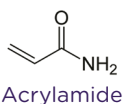
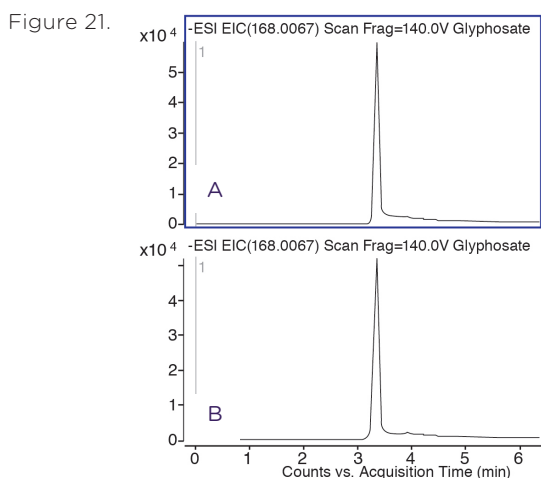


Figure 20 shows an overlay of two different lots.



Method Conditions

Column: Cogent Diamond Hydride, 4µm, 100Å
Catalog No.: 70000-15P-2
Dimensions: 2.1 x 150mm
Mobile Phase: A: DI water + 5mm ammonium acetate
 B: 90% acetonitrile/10% DI water/10mm

Gradient:	time (min.)	%B
	0	80
	1	80
	1.1	5
	5	5
	6	80

Post Time: 5 min
Injection vol.: 10µL
Flow rate: 0.5mL/min
Detection: ESI - neg - Agilent 6210 MSD TOF mass spectrometer
Sample Prep: Glyphosate: 168.0067m/z (M - H)
 Figure A: injection #1, RT = 3.365 min
 Figure B: injection #5, RT = 3.366 min
 Sample stock solution was purchased from Sigma (1000mcg/mL). Sample for analysis was made by diluting the stock 1:100 in 30:70 solution A and B.

