

Can I use of the Cogent Diamond Hydride HPLC column above pH 7 in HPLC – FAQ

We do not recommend the use of the Cogent Diamond Hydride™ column above pH 7.

If you need to use an ammonium acetate DI water / acetonitrile mobile phase, the pH is above 7. In this case, try adjusting the pH with an acetic acid solution to get a pH of about 6.5. The increased amount of acetate is not crucial.

The problem with high pH is that the solubility of silica increases at increasing pH. If dissolution occurs, this will result in voids developing in the column, which will show up in the chromatograms as broad or split peaks.

Some of the Cogent TYPE-C Silica™ columns have a higher pH threshold, such as the Bidentate C18™ or UDC-Cholesterol™. The reason for this is believed to be due to the effect of the bonded moiety and the direct silicon carbon bonds of these columns. Unlike the Diamond Hydride™, these stationary phases have relatively bulky bonded ligands which can help shield the silica hydride surface from attack. Therefore they are less susceptible to dissolution at higher pH.

Click [HERE](#) for Cogent Diamond Hydride™ HPLC column ordering information and pictures of the columns



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