

Ligand Bonding to Silica Hydride Particles in the Cogent UDA HPLC columns - Tech Information

Date: 14-APRIL-2020 Last Updated: 30-NOVEMBER-2025

The ligand is linked to the silica surface by direct silicon to carbon bonds

For more details, the Cogent UDA™ HPLC column ligand is a C11 chain with a carboxylic acid on one end. On the other end, there are two orientations for how the ligand could be bonded to the Cogent TYPE-C™ Silica support.

The first orientation is shown in A. In this case, only one hydrosilation occurs from the starting reagent, resulting in a remaining double bond and a single point of attachment.

In the second orientation B, another hydrosilation occurs with structure A and a nearby Si-H group, resulting in no more double bonds. This requires that the other Si-H group is close enough to react. This is called a Bidentate attachment.

For the Cogent UDA™ HPLC columns, B is structure of the ligand.

