

ALD Coupling Solution

Sterogene Bioseparations makes a Cyanoborohydride-based coupling solution that is recommended for use with ALD Actigels. The advantage of this ALD Coupling Solution is that it is free of NaBH_4 , which is a more aggressive reducing agent and can reduce coupling efficiency and possibly reduce the activity of the ligand. NaCNBH_4 from commercial suppliers contains variable amounts of BaBH_4 , but at Sterogene Bioseparations we take care to produce a product that does not contain measurable amounts of borohydride ions.

Detailed coupling conditions are found in the instructions for use for the ALD Actigels, but our recommended protocol calls for one-fifth volume of Coupling Solution when added to the resin and ligand. Room temperature incubation for concentrated samples is complete at two hours, and quenching of free aldehydes with a primary amine requires an additional 20 minutes. If cross-linking is performed on ice or in a cold room, 6-8 hours may be required for coupling, with an additional hour for quenching.