

The primary advantage of zirconia over either silica or polymeric stationary phases is its extreme chemical and thermal stability. Unlike silica, zirconia is completely stable over the entire pH range and at column temperatures as high as 200 °C. Unlike polymeric phases, zirconia does not shrink or swell as a function of mobile phase organic content or ionic strength. It has very high mechanical strength and high efficiencies. This extreme stability results in a column that may be cleaned under harsh conditions (acidic or basic), and also results in a longer column lifetime. Long column life and stability translates to a reduced cost per analysis and a wider range of possible chromatographic conditions. Zirconia columns can and should be run at your oven's highest temperature. The column will remain stable, providing faster analysis, less need for organic modifier and decreased system down time due to pump maintenance.