

When to use PEEK or stainless steel for HPLC column hardware - Tips & Suggestions

Data in certain types of analyses may be adversely affected by use of stainless steel HPLC columns. In these cases, you may want to consider a column made of PEEK hardware instead of traditional stainless steel. Mainly used in Ion Chromatography and for some bioactive compounds, PEEK columns may lack column to column precision and lack column efficiency due to the limited pressure limits of PEEK during column packing. PEEK use is also limited by the solvents and temperature of some method conditions.

In the majority of chromatographic analyses, stainless steel will not present a problem to analysis, but some anionic compounds such as phosphates may interact with metals from the SS hardware and result in peak shape problems or low recovery. Amines, Proteins, Peptides and other compounds also can interact and degrade or absorb with Stainless Steel hardware. In this case we suggest using our metal free, coated columns due to the higher efficiencies, the improved inertness and generally a more robust solution.

