

Protecting HPLC analytical columns and when to use guard columns vs Cogent Column Filters – Tips & Suggestions

All filters including an in line filter such as a pre-column, Cogent Column Filter are designed solely for preventing non-dissolved particulate matter from reaching the analytical column or the HPLC instrument.

Note that the analytical column does have porous frits on the inlet (and outlet) that will also prevent some undissolved material or shredded pieces of pump seals from reaching the column bed, but if they become clogged, they may be difficult to remove and the column is no longer be usable.

A guard column will also perform this function but not as well, in addition to its primary purpose of retaining matrix contaminants that would otherwise end up at the head of the analytical column. If a guard column is not properly matched to the analytical column, it could degrade your chromatography. However, if all you need is to filter out particulate matter, you should choose Cogent Column Filter over a guard column since the former are much less costly and easy to dispose of.

When the Cogent Column Filter becomes clogged with particulate matter, it can simply be replaced with a new one, as they are designed to be disposable. We recommend that all HPLC columns be used with **Cogent Column Filters** to increase their lifetimes.

Rule of thumb is that a guard column is a chemical “filter” and an in-line filter is a particle filter.

