

## Column Filters Should Never Change HPLC Results - HPLC Primer

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### Overview

All pre-column filters including the Cogent brand, are designed to provide particulate protection without influencing chromatographic separation, detector response, or retention characteristics.

When analytes are compatible with the materials of construction—PEEK and stainless steel—the filter serves purely as a mechanical safeguard, not an active component affecting the chemistry of the separation.

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### Impact on Chromatography

Under normal operating conditions, Cogent Column Filters will not alter HPLC results. They do not introduce additional dead volume, do not retain analytes, and do not impart chemical interactions that would influence:

- Retention time
- Peak shape
- Resolution
- Quantitation

Their function is entirely protective.

The only scenario where interference could occur is if analytes are not compatible with PEEK or stainless steel, but for most routine HPLC applications these materials are chemically inert and safe.

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### Purpose of the Filter

The Cogent Column Filter acts as a first-line defense against physical contaminants such as:

- Dust and airborne particles
- Non-dissolved buffer salts
- Pump-seal debris
- Instrument-generated particulate matter

By capturing these contaminants before they reach the column, the filter preserves the performance and lifespan of both guard and analytical columns—without changing the chromatography itself.



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**MicroSolv Technology Corporation**

9158 Industrial Blvd. NE, Leland, NC 28451

Tel: (732) 380-8900

Fax: (910) 769-9435

Email: [customers@mtc-usa.com](mailto:customers@mtc-usa.com)

Website: [www.mtc-usa.com](http://www.mtc-usa.com)