

Materials Used in the Construction of Column Filters - Tech Information

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Overview

Cogent pre-column filters are designed for chemical inertness, mechanical durability, and broad HPLC system compatibility.

To achieve these performance characteristics, each filter is manufactured using only two high-purity materials, carefully selected to ensure reliability in demanding analytical environments.

Materials of Construction

The Cogent Column Filters are composed exclusively of:

1. High-Purity PEEK Housing

- The main body of the filter is manufactured from high-purity, inert PEEK (polyether ether ketone).
- PEEK is widely used in HPLC instrumentation due to its exceptional chemical resistance, dimensional stability, and compatibility with common organic and aqueous mobile phases.
- Its non-reactive nature ensures no interference with trace-level detection or sensitive analytes.

2. Internal Stainless-Steel Filter Element

- Inside the housing is a precision-engineered stainless-steel frit (filter element).
- This component provides robust particulate retention, excellent pressure tolerance, and long-term structural stability.
- Stainless steel is ideal for use in pre-column filtration due to its rigidity and resistance to deformation under high-pressure flow.

These are the only two materials used in the construction of the pre-column Cogent Column Filters, ensuring predictable, inert performance in a wide range of HPLC applications.

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