High Purity Pfa Chromatography Microcolumn Corrosion Resistant Resin Column With Sieve Plate For Trace Analysis

Item Number: PL-CP275

Introduction

Premium PFA chromatography microcolumns for ultra-trace analysis. Featuring one-piece molded construction, superior chemical resistance, and customizable sieve plates, these columns ensure zero contamination and exceptional durability in the most demanding laboratory environments and industrial chemical processes.

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Application	Description	Key Benefit
Geochemical Isotope Separation	Separation of Rare Earth Elements (REE) and isotopes from geological samples using ion exchange resins.	Metal-free environment prevents contamination of sensitive isotope ratios.
Semiconductor Grade Chemicals	Purification and trace metal analysis of photoresists, etchants, and high-purity solvents used in wafer fabrication.	Ensures PPT-level purity requirements are met without material interference.
Nuclear Waste Monitoring	Analysis of radioactive isotopes in environmental samples and waste streams requiring high chemical durability.	Resists radiation-induced degradation and handles aggressive acid digests.
Environmental Trace Metal Testing	Pre-concentration of heavy metals from seawater or industrial wastewater samples for ICP-MS analysis.	Superior recovery rates due to low surface adsorption properties of PFA.
Pharmaceutical API Synthesis	Purification of high-value active pharmaceutical ingredients where compatibility with organic solvents is critical.	Broad solvent compatibility and ease of sterilization for sensitive processes.
Battery Material Research	Testing of electrolyte components and lithium-ion battery precursors involving corrosive lithium salts.	High temperature and chemical resistance during long-term testing cycles.
Forensic Toxicology	Isolation of specific toxicological markers from complex biological matrices using micro-chromatography.	Eliminates cross-contamination between samples through easy and thorough cleaning.

Parameter	Specification Detail (PL-CP276)
Standard Volume Options	15ml, 30ml (Custom volumes available upon request)
Internal Diameter (ID)	6mm (Fully customizable via CNC machining)
Manufacturing Process	One-piece integrated molding and custom CNC finishing
Material	100% High-Purity Grade PFA (Perfluoroalkoxy)
Sieve Plate (Frit)	Customizable porosity; PTFE or PFA options available
Temperature Resistance	-200°C to +260°C (-328°F to +500°F)
Chemical Compatibility	Universal (HF, Aqua Regia, Nitric, Sulfuric, Organic Solvents)
Internal Surface Finish	Mirror-smooth, non-wetting surface
Leakage Rating	Zero-leakage integrated design
Customization Capability	Full bespoke fabrication: Length, Diameter, Wall Thickness, Fittings