

High Purity Pfa Sample Vials Acid Resistant Trace Analysis Digestion Cups With Lids

Item Number: PL-CP396



Introduction

High-purity PFA sample vials offer exceptional chemical resistance and ultra-low metal ion leaching for trace analysis. These customizable digestion cups feature tight-sealing lids and a contamination-free design, ensuring maximum sample integrity in demanding laboratory environments across diverse industrial applications.

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Application	Description	Key Benefit
ICP-MS Trace Analysis	Preparation and digestion of samples for inductively coupled plasma mass spectrometry.	Minimizes background noise and ensures sub-ppt detection limits.
Geochemical Digestion	Dissolution of geological ore and rock samples using concentrated hydrofluoric and nitric acids.	Exceptional resistance to HF which would dissolve glass or quartz vessels.
Semiconductor Fabrication	Handling and storage of high-purity etching chemicals and photoresists.	Prevents metallic contamination that could compromise wafer yield.
Environmental Testing	Analysis of heavy metals in soil, wastewater, and sludge samples.	High recovery rates of trace metals due to low surface adsorption.
Pharmaceutical Stability	Long-term storage of active pharmaceutical ingredients (APIs) in aggressive solvents.	Prevents leachable organic contaminants from interfering with stability data.
Nuclear Chemistry	Handling of radioactive isotopes and corrosive cooling water samples.	Radiation resistance and chemical durability in harsh environments.
Hydrothermal Synthesis	Serving as a liner for reaction vessels in high-pressure, high-temperature chemical synthesis.	Maintains purity and structural integrity under hydrothermal conditions.

Feature	Specification Details (Reference: PL-CP396)
Item Number	PL-CP396
Base Material	Ultra-High Purity Perfluoroalkoxy (PFA)
Capacity Variants	5ml (Standard), with multiple custom capacities available
Design Type	Digestion Cup / Sample Vial with Screw-Cap Lid
Temperature Range	-200°C to +260°C
Chemical Resistance	Universal resistance to acids, bases, and organic solvents
Surface Energy	Low surface energy, hydrophobic, non-stick
Manufacturing Process	Precision CNC Machining / Injection Molding options
Cleaning Compatibility	Microwave-assisted acid cleaning, boiling acid bath, autoclaving
Customization	Bespoke dimensions, wall thicknesses, and lid configurations available