

Corrosion Resistant Ptfе Digestion Vessel Low Background Straight Walled Boiling Bottle For Trace Analysis

Item Number: PL-CP72



Introduction

High-purity PTFE digestion vessels engineered for trace analysis and aggressive acid sample preparation. These straight-walled boiling bottles offer exceptional chemical resistance and ultra-low background levels for precision laboratory workflows. Contact us for custom fluoropolymer solutions.

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Application	Description	Key Benefit
Trace Metal Analysis	Digestion of geological and environmental samples using concentrated mineral acids for ICP-MS.	Near-zero blank values ensure high sensitivity and lower detection limits.
Semiconductor Processing	Cleaning and preparation of silicon wafers or electronic components in ultra-pure acid baths.	Prevents metallic ion contamination in sensitive cleanroom environments.
Pharmaceutical QA	Acid digestion of organic compounds for heavy metal testing according to USP and pharmacopeia standards.	Compliance with strict purity requirements and high sample recovery rates.
Battery Material Testing	Preparation of cathode and anode materials for elemental composition and impurity analysis.	Resistance to aggressive electrolytes and corrosive solvent mixtures during processing.
Geochemical Prospecting	Large-scale boiling and digestion of rock, ore, and soil samples in aqua regia or hydrofluoric acid.	Long-term durability and resistance to thermal shock in high-throughput labs.
Petrochemical Analysis	Decomposition of oil and polymer samples for catalyst and additive quantification.	High temperature resistance and chemical compatibility with complex hydrocarbons.
Microfluidic Pre-treatment	Preparation and storage of specialized reagents and buffers for micro-channel reactor systems.	Maintenance of chemical purity for high-precision fluidic paths and delicate reactions.

Parameter	Specifications for PL-CP72 Series
Material	100% Virgin Polytetrafluoroethylene (PTFE)
Design Type	Straight-walled (Vertical internal profile)
Standard Capacity Options	60ml, 100ml (Fully customizable to any volume)
Wall Configuration	Straight-up-and-down (No neck/shoulder)
Temperature Range	-200°C to +260°C
Chemical Compatibility	Universal (Except molten alkali metals, gaseous fluorine)
Trace Analysis Suitability	Optimized for low-background PPT/PPB analysis
Manufacturing Method	Advanced CNC Lathe/Milling (Non-molded)
Base Design	Flat base for optimal heat transfer on hot plates
Customization Capability	Full customization of height, diameter, wall thickness, and cap style