Corrosion Resistant Ptfe Digestion Bottle Solid Liquid Reaction Vessel High Purity Trace Analysis Mineral Labware

Item Number: PL-CP366

Introduction

Optimize geological trace analysis with our corrosion-resistant PTFE digestion bottles. Engineered for solid-liquid reactions without leaching, these high-purity vessels ensure sample integrity in demanding mineral research and industrial laboratory environments. Request a custom quote today for specific requirements.

Learn More

Application	Description	Key Benefit
Geochemical Trace Analysis	Dissolution of mineral ores and rock samples using concentrated hydrofluoric and nitric acids for element quantification.	Eliminates silica interference and trace metal contamination from the vessel itself.
Rare Earth Element Refining	High-temperature solid-liquid reactions used in the purification and separation of rare earth oxides and salts.	Maintains purity levels required for high-tech industrial applications and research.
Environmental Soil Digestions	Preparation of soil and sediment samples for heavy metal analysis in compliance with regulatory standards (e.g., EPA methods).	Ensures absolute sample integrity and consistency across high-volume testing batches.
Nuclear Material Processing	Handling and reacting radioactive isotopes or corrosive uranium derivatives in controlled laboratory settings.	Superior radiation resistance compared to standard polymers and total chemical containment.
Semiconductor Grade Cleaning	Storage and reaction of ultra-pure chemicals used in the wafer fabrication and etching processes.	Prevents ionic migration that could lead to microchip failure or batch contamination.
Pharmaceutical Synthesis	Small-scale synthesis of active pharmaceutical ingredients (APIs) involving aggressive catalysts or corrosive intermediates.	Non-reactive surface ensures no pharmaceutical impurities are introduced during the reaction.
Hydrothermal Synthesis	Low-pressure hydrothermal reactions where temperature stability and chemical resistance are required simultaneously.	Reliability under sustained thermal stress without mechanical deformation or leaking.

Specification Parameter	Details for Product Item PL-CP366
Material Construction	100% High-Purity Virgin PTFE (Polytetrafluoroethylene)
Model Reference	PL-CP366 Series
Volume Options	50ml, 100ml (Standard); Fully Customizable Capacities Available
Temperature Range	-200°C to +260°C (-328°F to +500°F)
Chemical Compatibility	Universal Resistance (except molten alkali metals and elemental fluorine)
Wall Thickness	Standard Heavy-Wall (Customizable per application requirements)
Sealing Mechanism	Precision-Threaded PTFE Screw Cap (Integrated Seal Design)
Internal Finish	< 0.5 µm Ra (Ultra-Smooth CNC Polished)
Leaching Profile	Non-detectable levels of trace metals and organics
Manufacturing Process	Isostatic Compression followed by precision CNC Machining

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Specification Parameter	**Details for Product Item PL-CP366**	
Customization Capability	Full bespoke fabrication based on technical drawings or specific requirements	