

High Purity Ptfе 2L Reagent Bottle Low Background Custom Size Fluoropolymer Extraction Vessel

Item Number: PL-CP311



Introduction

Professional high-purity PTFE 2L reagent bottles for trace analysis and chemical extraction. These non-leaching low-background fluoropolymer vessels feature customizable dimensions and shapes for demanding laboratory applications involving aggressive acids and high-temperature organic solvents.

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Application	Description	Key Benefit
Trace Metal Analysis	Storage of high-purity diluents and rinsing solutions (e.g., 2% HNO ₃) for ICP-MS and AAS detection.	Eliminates leaching and ensures sub-ppb detection accuracy.
Semiconductor Processing	Transport and containment of ultra-pure wet chemicals used in wafer cleaning and etching stages.	Maintains reagent purity levels required for microelectronic manufacturing.
Pharmaceutical Extraction	Solvent extraction of active ingredients from biological matrices or plant materials.	Chemical stability prevents cross-reaction between the vessel and the sample.
Isotope Geochemistry	Digestion and dissolution of rock or soil samples using concentrated hydrofluoric acid.	Superior resistance to HF which would dissolve standard glass labware.
Environmental Monitoring	Long-term storage of water and soil samples for heavy metal and pesticide residue testing.	Non-adsorptive walls prevent loss of micro-components during storage.
Electrolyte Storage	Containment of aggressive battery electrolytes during material testing and cell assembly.	Prevents contamination and withstands corrosive organic solvent blends.
Cryogenic Research	Handling of liquid gases or samples at extremely low temperatures for physical science experiments.	Material remains ductile and leak-proof even in cryogenic environments.
Custom Reaction Vessels	Integration into specialized synthesis rigs as a bespoke reaction chamber with specific ports.	Fully customizable shape allows for seamless integration into complex setups.

Specification Category	Parameter Details (Model PL-CP311)
Product Identifier	PL-CP311
Material Construction	100% High-Purity Virgin PTFE (Polytetrafluoroethylene)
Nominal Capacity	2000ml (2 Liters) - Fully Customizable
Thermal Range	-200°C to +260°C (-328°F to +500°F)
Wall Type	Heavy-wall construction for industrial durability
Closure Type	PTFE Screw Cap with precision-machined internal seal
Chemical Resistance	Universal resistance (except molten alkali metals and elemental fluorine)
Internal Finish	Super-smooth, crevice-free finish to prevent sample carryover
Cleaning Compatibility	Autoclavable; compatible with ultrasonic cleaning and acid leaching

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Customization Options	Dimensions, neck diameter, thread type, and overall geometry (Custom Product)	
Surface Energy	Low surface tension (hydrophobic/non-stick)	
Manufacturing Process	Precision CNC Machined from solid block or high-quality mold	