Semiconductor Electronic Grade Pfa Sampling Bottle For Ultrapure Reagent Storage And Trace Analysis

Item Number: PL-CP43

Introduction

Premium semiconductor grade PFA sampling bottles offer zero background interference and exceptional chemical inertness for storing ultrapure reagents and conducting trace analysis in demanding laboratory environments where sample integrity is paramount for analytical success. Ideal for high-purity chemical management solutions.

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Application	Description	Key Benefit
Semiconductor Photolithography	Storage and transport of electronic-grade etching chemicals and photoresist developers.	Prevents metallic ion contamination that could cause circuit defects at the nanometer scale.
Trace Metal Analysis	Preparation and storage of calibration standards and samples for ICP-MS and ICP-OES.	Ensures near-limit analytical accuracy by providing a zero-background contamination environment.
Geochemical Isotope Research	Long-term storage of geological digestions and seawater samples for isotopic ratio mass spectrometry.	Prevents the adsorption of rare earth elements and isotopes onto container walls.
Environmental Monitoring	Field collection of water and soil samples in extreme environments, including Arctic and geothermal sites.	Shatterproof durability and thermal stability ensure sample integrity from field to laboratory.
Pharmaceutical Bio-sensing	Maintenance of phosphate-buffered saline (PBS) systems and sensitive bioactive reagents.	Minimizes interference peaks caused by impurities at the nanomolar detection level.
Battery Research	Storage of high-purity electrolytes and lithium-ion battery precursors during testing cycles.	Chemical resistance to aggressive electrolytes prevents container-reagent interactions.
High-Purity Chemical Logistics	Distribution of ultra-pure reagents and solvents in the chemical manufacturing supply chain.	Lightweight and robust alternative to glass, reducing shipping costs and breakage risks.

Parameter	Details / Specification
Product Item Number	PL-CP43
Material	High-Purity Electronic Grade Perfluoroalkoxy (PFA)
Standard Capacities	PL-CP43-500 (500ml), PL-CP43-1000 (1000ml)
Customization	Full CNC bespoke fabrication available for all dimensions and shapes
Operating Temperature Range	-200°C to +260°C (-328°F to +500°F)
Chemical Resistance	Universal resistance (except elemental fluorine and molten alkali metals)
Surface Background Level	Ultra-low metallic background suitable for ppt-level analysis
Closure Type	Precision-threaded PFA screw cap with integrated sealing ring
Interior Finish	Ultra-smooth, non-porous, hydrophobic surface
Fabrication Method	Advanced molding and custom CNC machining