Customizable Bendable Ptfe Sampling Cup Corrosion Resistant Low Background Fluoropolymer Deep Liquid Sampler

Item Number: PL-CP104

Introduction

Engineered for high-purity trace analysis and deep-well sampling, this customizable bendable PTFE cup offers unmatched chemical resistance and ultra-low background levels, ensuring zero sample contamination in demanding industrial and laboratory environments with precision custom-fabricated fluoropolymer construction.

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Application	Description	Key Benefit
Semiconductor Grade Sampling	Collection of high-purity acids and photoresists within cleanroom environments to monitor for trace metallic impurities.	Prevents sub-ppb level contamination.
Deep Reactor Monitoring	Accessing liquid phases at specific depths within stirred-tank reactors or pressurized vessels during chemical synthesis.	Accurate depth-specific data without contamination.
Environmental Trace Analysis	Sampling groundwater from deep boreholes or monitoring industrial effluent for heavy metal concentrations.	Maintains sample integrity from source to lab.
Pharmaceutical Extraction	Handling aggressive organic solvents and acidic plant extracts during the stabilization and pH measurement phases.	No ion exchange with container walls.
Petrochemical Quality Control	Drawing samples from storage tanks containing corrosive fuel additives or raw crude oil for elemental analysis.	High durability in aggressive hydrocarbon media.
Mining and Hydrometallurgy	Collection of leachates and concentrated acids from ore processing streams where metallic tools would dissolve.	Total resistance to aqua regia and hot acids.
Nuclear Forensics	Handling radioactive liquid samples where low-adhesion and easy decontamination of the tool surface are critical for safety.	Minimizes residual hazardous material retention.
Battery Research	Sampling electrolytes and precursor solutions during the development of lithium-ion and solid-state battery technologies.	Chemical compatibility with reactive electrolytes.

Feature	Specification Details (Model PL-CP104 Series)
Model Identifier	PL-CP104 (Customizable Series)
Primary Material	High-Purity Virgin PTFE (Polytetrafluoroethylene)
Secondary Material	Optional High-Purity PFA for enhanced transparency
Design Type	Bendable / Flexible Neck Deep Sampler
Capacity Range	Fully customizable (from 10mL to 2000mL+)
Shaft Length	Custom-fabricated to client requirements (up to several meters)
Handle Diameter	Ergonomically optimized based on overall length and capacity
Chemical Resistance	Compatible with all common laboratory acids, bases, and solvents
Temperature Range	-200°C to +260°C (Material stability)
Purity Grade	Trace analysis grade (suitable for sub-ppb detection levels)

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Feature	**Specification Details (Model PL-CP104 Series)**	
Fabrication Method	End-to-end custom CNC machining and thermal forming	
Surface Finish	Ultra-smooth, crevice-free internal and external surfaces	
Flexibility	Variable flex ratings based on custom thickness specifications	