Industrial High Purity Ptfe Digestion Tubes Chemical Resistant Teflon Labware Custom Fabricated Trace Analysis Vessels

Item Number: PL-CP31

Introduction

Procurement specialists demand high-purity PTFE digestion tubes for trace analysis. These custom-engineered Teflon vessels provide extreme chemical resistance and thermal stability up to 260°C, ensuring zero contamination and superior durability in the most demanding industrial laboratory environments for professionals.

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Application	Description	Key Benefit
Environmental Soil Analysis	Digestion of soil and sediment samples using concentrated nitric and hydrofluoric acids.	Zero leaching of trace metals from the vessel wall into the sample.
Semiconductor Wafer Analysis	High-purity etching and digestion of silicon-based components for contaminant detection.	Maintains ultra-pure conditions required for sub-parts-per-billion analysis.
Metallurgical Ore Processing	Dissolving mineral samples in strong acids at elevated temperatures for elemental profiling.	Resists high heat and aggressive chemical abrasion during long digestion cycles.
Pharmaceutical Quality Control	Testing for heavy metal impurities in active pharmaceutical ingredients (APIs).	Ensures compliance with strict regulatory purity standards (USP/EP).
Geochemical Exploration	Acid digestion of rock samples to identify precious and rare earth element concentrations.	Robustness allows for repeated use in remote or high-volume testing facilities.
Petrochemical Testing	Analysis of catalysts and crude oil derivatives requiring high-temperature sample preparation.	Thermal stability ensures safety and consistency during high-energy reactions.

Parameter Category	Specification Details for PL-CP31
Base Material	100% High-Purity Virgin Polytetrafluoroethylene (PTFE)
Manufacturing Process	Precision CNC Machined from Solid Fluoropolymer Stock
Temperature Range	-200°C to +260°C Continuous Service Temperature
Chemical Compatibility	Universal resistance to almost all acids, bases, and solvents
Customization Options	Fully Customizable Dimensions, Capacities, and Thread Types
Available Bottom Profiles	Flat Bottom, Round Bottom, or Conical/Tapered Designs
Wall Thickness	Tailored to application requirements (Standard to Heavy-Duty)
Sealing Mechanism	Customizable Screw Caps, Push-fit, or Integrated O-ring Seals
Internal Finish	Ultra-Smooth, Low-Roughness Machined Finish
Trace Elements	Ultra-low blank values for high-sensitivity trace analysis