

High Purity Ptfе Digestion Tubes For Microwave Systems Soil And Food Trace Analysis Acid Resistant Customizable

Item Number: PL-CP133



Introduction

Discover high-purity PTFE digestion tubes designed for advanced microwave systems. Engineered for soil and food trace analysis, these acid-resistant vessels ensure zero contamination and superior durability. Fully customizable to meet your specific laboratory requirements for demanding chemical applications.

[Learn More](#)

Application	Description	Key Benefit
Soil Heavy Metal Analysis	Digestion of soil and sediment samples using concentrated nitric and hydrofluoric acid for ICP-MS testing.	Complete matrix decomposition and zero trace metal leaching.
Food Safety Testing	Preparation of organic food samples to detect contaminants like Lead, Arsenic, and Cadmium in high-throughput rotors.	Microwave transparency ensures rapid and even sample processing.
Pharmaceutical Purity	Digestion of active pharmaceutical ingredients (APIs) to monitor residual catalyst metals.	High-pressure retention prevents the loss of volatile analytes.
Environmental Monitoring	Large-scale processing of wastewater and sludge samples for regulatory compliance testing.	Compatibility with 44-position systems increases lab throughput.
Geological Prospecting	Decomposition of ore and mineral samples requiring aggressive acid mixtures for mineralogical assay.	Exceptional resistance to HF and other highly corrosive mineral acids.
Petrochemical Analysis	Sample preparation of heavy oils and lubricants to determine wear metal concentrations.	Robust thermal stability handles high-temperature hydrocarbon digestion.
Forensic Science	Trace analysis of biological or physical evidence where sample quantity is limited and purity is paramount.	Non-adsorptive walls ensure maximum recovery of minute trace elements.

Feature	Specification Details for PL-CP133
Model Identifier	PL-CP133
Material Construction	High-Purity Virgin PTFE / PFA (Customizable)
Microwave Compatibility	Fully Microwave-Transparent for Volumetric Heating
Dimensions & Capacity	Custom Engineered to Client Specifications
Pressure Rating	Variable / Custom Designed for High-Pressure Safety Requirements
Temperature Range	Designed for Constant High-Temperature Operation (Custom Specified)
Vessel Geometry	Customized to fit 44-position or bespoke digestion rotors
Sealing Mechanism	Precision Machined Threading / Flange (Customizable)
Chemical Resistance	Full resistance to HF, HNO3, HCl, H2O2, and Aqua Regia

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Surface Finish	Ultra-smooth CNC machined internal walls (Low Surface Energy)	
Fabrication Method	End-to-end custom CNC machining for non-standard parts	