High Purity Ptfe Microwave Digestion Vessel Replacement Liner For Acid Sample Preparation And Trace Analysis

Item Number: PL-CP306

Introduction

Premium PTFE microwave digestion vessels designed for extreme acid resistance and high-pressure performance. Engineered for trace analysis and sample preparation in industrial laboratories, these customizable liners provide superior durability and chemical inertness.

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Application	Description	Key Benefit
Environmental Monitoring	Digestion of soil, sediment, and wastewater samples for heavy metal detection.	Ensures zero contamination from the vessel, vital for sub-ppb level detection.
Pharmaceutical Quality Control	Preparation of active pharmaceutical ingredients (APIs) and excipients for elemental impurity testing.	High chemical resistance to organic solvents and concentrated acids used in USP protocols.
Food and Beverage Safety	Digestion of organic matrices such as grains, meats, and dairy for nutritional and safety analysis.	Rapid processing of complex organic matter without sample loss or carryover.
Petrochemical Analysis	Decomposition of heavy crude oils, catalysts, and lubricants to analyze trace sulfur and metals.	Exceptional performance at high temperatures required to break down long-chain hydrocarbons.
Materials Science	Dissolution of advanced ceramics, specialty alloys, and polymers for composition verification.	Capability to withstand hydrofluoric acid and other aggressive digestion reagents.
Geochemical Exploration	Processing of rock samples and mineral ores for mineralogical assessment.	Durability against abrasive samples and high-pressure digestion of crystalline structures.
Clinical Research	Digestion of biological tissues and fluids for toxicological studies and trace element analysis.	Ultra-low background levels ensure accurate measurement of endogenous trace elements.

Feature	Specification Details (Model: PL-CP306)
Base Material	High-Purity Virgin PTFE / TFM
Manufacturing Process	Precision End-to-End Custom CNC Machining
Dimensions	Fully Customizable to Client Specifications
Volume Capacity	Bespoke sizing available (Standard and non-standard volumes)
Operating Temperature Range	Up to 260°C (Process dependent)
Pressure Rating	Designed for high-pressure microwave environments (Customizable)
Chemical Compatibility	Universal resistance (HF, HCl, HNO3, H2SO4, etc.)
Surface Finish	High-gloss, low-porosity machined finish
Closure Type	Threaded, snap-fit, or flange-style (Customizable)
Replacement Compatibility	Optimized as a direct replacement for major instrument brands