High Purity Laboratory Microwave Digestion Vessel Customizable Pfa Ptfe Digestion Tank For Analytical Sample Preparation Trace Metal Analysis

Item Number: PL-CP182

Introduction

Professional PTFE and PFA microwave digestion vessels for high-precision trace analysis. These customizable digestion tanks provide exceptional chemical resistance and thermal stability for industrial laboratory sample preparation. Contact our engineering team for bespoke technical solutions.

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Application	Description	Key Benefit
Environmental Monitoring	Digestion of soil, sediment, and wastewater samples for heavy metal detection (e.g., Lead, Arsenic, Cadmium).	Ultra-low blank values ensure accurate detection at parts-per-billion (ppb) levels.
Pharmaceutical Quality Control	Preparation of active pharmaceutical ingredients (APIs) and excipients for elemental impurity testing per USP standards.	Compliance with stringent purity requirements and contamination-free processing.
Geological and Mining	Decomposition of rock, mineral ores, and metallurgical slag using concentrated acid mixtures.	Ability to handle hydrofluoric acid for the complete dissolution of silicate structures.
Petrochemical Analysis	Digestion of crude oil, lubricants, and refined products to analyze catalyst residues and wear metals.	High pressure and temperature tolerance for the breakdown of complex organic matrices.
Food and Beverage Safety	Digestion of packaged food, dairy products, and agricultural samples for nutritional and toxicological analysis.	Reliable retention of volatile elements like Mercury and Selenium during digestion.
Advanced Materials Research	Sample preparation for high-performance ceramics, polymers, and electronic components.	Customizable vessel designs to accommodate specialized or non-standard sample volumes.

Feature	PL-CP182 Specification Profile
Model Identification	PL-CP182 Series
Core Materials	Virgin High-Purity PTFE / TFM / PFA (Customizable)
Internal Capacity	55ml Standard (Fully customizable to any volume)
Operating Temperature Range	Customizable based on material selection (up to 260°C)
Maximum Pressure Rating	Engineered to client-specific safety and system requirements
Microwave Compatibility	Compatible with major domestic and international microwave digestion systems
Closure Type	Precision-threaded cap with customizable sealing inserts
Manufacturing Process	End-to-end CNC fabrication from isostatically molded stock
Chemical Resistance	Full resistance to HF, HNO3, HCl, H2SO4, and Aqua Regia
Customization Options	Dimensions, thread pitch, wall thickness, and specialized venting ports