

# Custom 100MI Ptfе Digestion Tube For Heavy Metal Trace Analysis And High Temperature Acid Digestion

Item Number: PL-CP351



## Introduction

High-performance 100ml PTFE digestion tubes designed for heavy metal analysis. Featuring superior acid resistance and a non-stick smooth surface, these customizable vessels ensure maximum sample recovery and zero contamination for critical laboratory workflows and complex chemical digestion.

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Application	Description	Key Benefit
Environmental Monitoring	Digestion of soil, sediment, and wastewater samples for trace metal detection via ICP-MS.	Zero leaching ensures accurate ppb-level environmental reporting.
Food Safety Testing	Preparation of agricultural and food products for arsenic and mercury analysis.	Non-stick surface prevents sample loss of oily or complex food matrices.
Metallurgical Analysis	Dissolution of high-purity metal alloys and ores using aggressive mineral acids.	Resistant to hydrofluoric acid which would dissolve standard glassware.
Pharmaceutical Quality Control	Testing of active pharmaceutical ingredients (APIs) for heavy metal impurities according to USP standards.	High purity material prevents false positive results in sensitive assays.
Petrochemical Research	Analysis of catalyst residues and trace impurities in crude oil and refined products.	Withstands the high temperatures required for breaking down organic compounds.
Geochemical Exploration	Large-scale digestion of rock and mineral samples for rare earth element (REE) quantification.	Precision CNC fabrication ensures uniformity across high-volume sample batches.
Hydrothermal Synthesis	Small-scale reaction vessel for the synthesis of advanced nanomaterials.	Excellent thermal insulation and chemical stability for consistent crystal growth.

Parameter	Specification Details for PL-CP351
Model Identifier	PL-CP351
Material Construction	High-Purity Polytetrafluoroethylene (PTFE)
Nominal Capacity	100ml (Standard) / Fully Customizable Sizes Available
Operating Temperature Range	-200°C to +260°C
Chemical Resistance	Resistant to all strong acids (HF, HNO3, HCl, H2SO4), alkalis, and organic solvents
Internal Surface Finish	Mirror-smooth CNC polished; non-adsorbing and non-stick
Contamination Profile	Certified low heavy metal leaching for trace analysis (As, Pb, Cd, Hg)
Fabrication Method	End-to-end custom CNC machining for precise tolerances
Customization Options	Height, Diameter, Wall Thickness, Flange Style, and Cap Integration
Cleaning Method	Autoclavable; compatible with acid soaking and ultrasonic cleaning