

# Custom Ptfе Digestion Tubes And High Purity Polytetrafluoroethylene Centrifuge Vessels 60MI For Trace Analysis

Item Number: PL-CP222



## Introduction

Precision-engineered custom PTFE digestion tubes for high-purity trace analysis. These 60ml centrifuge vessels offer unmatched chemical inertness and extreme acid resistance, ensuring zero contamination for demanding industrial laboratory processes, specialized sample preparation, and advanced reagent storage workflows in modern facilities.

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Application	Description	Key Benefit
Geochemical Soil Digestion	Dissolution of mineral and soil samples using hydrofluoric and perchloric acid mixtures for elemental mapping.	Resists the most aggressive acid combinations while ensuring zero background contamination from the vessel.
Semiconductor Grade Analysis	Testing of high-purity silicon and electronic chemicals for sub-ppb metallic impurities.	Maintains the highest purity standards required for semiconductor quality control and failure analysis.
Pharmaceutical Bio-analysis	Mineralization of biological tissues and active pharmaceutical ingredients (APIs) for heavy metal testing.	Prevents adsorption of organic molecules and ensures complete recovery of trace metals like Lead, Arsenic, and Mercury.
Environmental Water Testing	Preparation of industrial wastewater and seawater samples for heavy metal monitoring via ICP-MS.	Excellent sealing prevents the loss of volatile analytes such as Selenium or Mercury during the digestion process.
Petrochemical Catalyst Recovery	Digestion of spent catalysts and petroleum fractions to determine precious metal content.	Withstands high-temperature digestion and provides high mechanical strength for subsequent centrifugation steps.
Microwave Digestion Systems	Custom-fitted liners for high-energy microwave reactors used in rapid sample mineralization.	Transparent to microwave radiation while providing the thermal stability needed for high-pressure reactions.
Forensic Toxicology	Decomposition of hair, bone, and tissue samples in criminal investigations for poison detection.	Ensures that no external contaminants interfere with sensitive evidence and legal analytical standards.

Specification Category	Parameter Details (PL-CP222)
<b>Model Identifier</b>	PL-CP222 (Standard Base Model)
<b>Material Construction</b>	100% Virgin High-Purity PTFE (Polytetrafluoroethylene)
<b>Nominal Volume</b>	60ml (Custom volumes available upon request)
<b>Fabrication Method</b>	End-to-end precision CNC machining
<b>Surface Finish</b>	High-polish interior (Ra < 0.4µm) to prevent sample adhesion
<b>Temperature Range</b>	-200°C to +260°C (Continuous); +300°C (Intermittent)
<b>Chemical Resistance</b>	All acids (including HF), alkalis, and organic solvents
<b>Trace Metal Background</b>	Optimized for ppt-level analysis; pre-cleaned options available

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Closure Type	Precision-threaded screw cap with integrated sealing lip	
Dimensional Tolerance	Custom specified (Standard $\pm 0.05\text{mm}$ )	
Pressure Rating	Variable based on wall thickness and closure design	
Compatibility	Designed for integration with heating blocks and centrifuge rotors	