

# High Purity Tfm Microwave Digestion Vessels For Trace Analysis And Custom Sample Preparation Systems

Item Number: PL-CP370



## Introduction

Premium TFM microwave digestion vessels designed for high-pressure sample preparation. These customizable fluoropolymer liners ensure superior chemical resistance and thermal stability for trace metal analysis across diverse industrial laboratory applications.

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Application	Description	Key Benefit
Environmental Soil Analysis	Digestion of complex soil and sediment matrices for heavy metal quantification via ICP-MS.	Complete recovery of volatile elements with zero leaching from the vessel walls.
Pharmaceutical Quality Control	Preparation of active pharmaceutical ingredients (APIs) for USP <232>/<233> elemental impurity testing.	High-purity TFM ensures compliance with strict regulatory detection limits.
Geochemical Exploration	Dissolution of mineral ores and metallurgical samples using aggressive acid mixtures including HF.	Exceptional resistance to hydrofluoric acid at high temperatures and pressures.
Food Safety Testing	Breakdown of fat-rich and complex organic food products for nutritional and contaminant analysis.	Robust pressure handling for samples that produce high volumes of gaseous byproducts.
Petrochemical Analysis	Digestion of catalysts, polymers, and crude oil derivatives for trace element monitoring.	Structural integrity is maintained even when exposed to high-energy organic reactions.
Clinical Research	Preparation of biological tissues and fluids for toxicological and metabolic studies.	Ultra-smooth surfaces prevent biological residue buildup and cross-contamination.
Electronic Material Testing	Purity verification of semiconductor-grade chemicals and high-tech ceramic materials.	Minimal background interference for ultra-trace level analysis of rare elements.

Specification Category	Parameter Details (Model PL-CP370)	Customization Options
Base Material	High-Purity Imported TFM (Modified PTFE)	Available in PTFE, PFA, or Glassy Carbon upon request
Compatible Instrumentation	Designed for XT-MUI / XT9906 Series	Bespoke dimensions for any domestic or imported system
Vessel Capacity	Fully Customizable Volume per Vessel	Standard and extended volume options available
Rotor Configuration	Compatible with 8, 10, and 12-position systems	Custom spacing and alignment for proprietary rotors
Pressure Rating	Designed for High-Pressure Digestions	Specific wall thickness optimization for high-load cycles
Temperature Range	Operational up to 260°C (Application dependent)	Enhanced thermal stabilizers available for specialty use
Manufacturing Process	5-Axis CNC Precision Machining	Custom engravings and serialization for tracking
Compliance	Trace Analysis Grade (Low Blank Values)	Certificates of material purity available per batch
Part Number	<b>PL-CP370</b>	Unique codes assigned to bespoke designs