# High Purity 30Ml Ptfe Corrosion Resistant Fluoropolymer Crucible With Graphite Heating Block Compatibility

**Item Number: PL-CP238**

## Introduction

This high-purity 30ml PTFE crucible delivers exceptional chemical resistance and low-background performance for trace analysis. Optimized for graphite block heating systems, this unit ensures reliable sample digestion and contamination-free processing for demanding industrial laboratory environments.

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| Application | Description | Key Benefit |
|---|---|---|
| Geological Mineral Digestion | Dissolving complex mineral ores and rock samples using concentrated hydrofluoric and perchloric acids. | Total resistance to aggressive acids ensures safe and complete dissolution without vessel degradation. |
| Environmental Trace Analysis | Preparing soil, sediment, and wastewater samples for heavy metal detection via ICP-MS or ICP-OES. | Ultra-low background levels ensure accurate detection of trace pollutants at parts-per-trillion levels. |
| Semiconductor Quality Control | Analyzing high-purity chemicals and solvents used in wafer fabrication for metallic contamination. | Prevents leaching of metal ions from the vessel walls that could skew high-sensitivity purity results. |
| Pharmaceutical API Testing | Digesting active pharmaceutical ingredients to test for residual catalysts or trace metallic impurities. | Inert surface prevents reactions with complex organic molecules, ensuring sample chemical stability. |
| Petrochemical Catalyst Analysis | Digesting heavy oils, polymers, and catalysts for sulfur and wear-metal content determination. | Durability in high-temperature acid environments reduces vessel replacement costs and prevents leaks. |
| Nuclear Material Processing | Handling and digesting radioactive samples in acidic media for isotopic ratio analysis. | High material density and chemical resistance provide a secure environment for hazardous sample processing. |

| Parameter | Specification Details for PL-CP238 |
|---|---|
| **Product Identifier** | PL-CP238 |
| **Primary Material** | Premium Isostatic PTFE / High-Purity PFA (Customizable) |
| **Nominal Capacity** | 30ml (Standard) / Fully Customizable capacity available |
| **Chemical Resistance** | Full resistance to HF, HNO3, HCl, H2SO4, and Aqua Regia |
| **Operating Temperature** | Continuous use up to 250°C (PTFE) / 260°C (PFA) |
| **Manufacturing Process** | End-to-end Custom CNC Fabrication / Precision Machining |
| **Heating Support** | Optimized for Graphite Block Heating Systems and Hot Plates |
| **Background Level** | Analytical Grade - Ultra-low trace metal background |
| **Surface Finish** | Smooth, non-porous hydrophobic interior with <0.1µm Ra |
| **Lid Configuration** | Optional customized lids (Threaded, Plug, or Loose-fit) |
| **Dimensional Tolerance** | Standard +/- 0.05mm or as per custom engineering drawings |
| **Customization Options** | Dimensions, wall thickness, base shape, and specialized fittings |