

# High Purity Acid Purification System Components Pfa Collection Bottles Silicone Heating Mantles And Temperature Controllers

Item Number: PL-CP373



## Introduction

Premium laboratory acid purification components featuring high-purity PFA collection bottles, uniform silicone heating mantles, and precise temperature controllers engineered for trace analysis environments requiring exceptional chemical resistance and ultra-clean performance through fully customizable manufacturing solutions.

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Application	Description	Key Benefit
Trace Metal Analysis	Purification of reagent-grade acids for ICP-MS and ICP-OES sample preparation.	Achieves ppt-level purity by removing metallic impurities through controlled distillation.
Semiconductor Fabrication	Cleaning of silicon wafers and quartzware using ultra-pure hydrofluoric and nitric acids.	Minimizes surface contamination, improving yield in microelectronic manufacturing processes.
Isotope Geochemistry	Preparation of high-purity solvents for high-precision mass spectrometry in geological dating.	Ensures zero cross-contamination and ultra-low background noise for precise isotopic ratios.
Pharmaceutical Quality Control	Purifying acids used in the digestion of active pharmaceutical ingredients (APIs).	Meets stringent regulatory requirements for heavy metal testing and elemental impurities.
Environmental Monitoring	Large-scale purification of acids for the analysis of seawater and wastewater samples.	Cost-effective in-house production of high-volume, high-purity reagents.
Nuclear Research	Processing and cleaning procedures involving highly corrosive radioactive tracers.	Long-term material stability and safe containment in demanding chemical environments.

Feature	Specification Detail for PL-CP373
Component Type	Customizable Acid Purifier Maintenance & Upgrade Kit
Materials of Construction	Ultra-High Purity PFA, PTFE, and Acid-Resistant Silicone
Heater Type	Silicone Rubber Flexible Heater (Custom-Molded)
Control System	Digital PID Temperature Control Box (Bespoke Configuration)
Collection Bottle Volume	Custom sizes available per customer specification
Operating Temperature	Precision-regulated for sub-boiling applications (Customizable)
Input Voltage	Configurable to 110V, 220V, or 240V AC
Chemical Compatibility	HF, HNO <sub>3</sub> , HCl, H <sub>2</sub> SO <sub>4</sub> , and Organic Solvents
Fabrication Method	Precision CNC Machining and Custom Thermal Molding
Connector Types	Customizable PFA Compression Fittings and Thermal Plugs