

Pfa Sub Boiling Acid Purifier Electronic Grade Distillation System Laboratory Trace Analysis Equipment

Item Number: PL-CP114



Introduction

Engineered for the continuous 48-hour preparation of ultra-trace electronic-grade acids this high-purity PFA sub-boiling distillation system ensures maximum chemical resistance and non-contaminating performance for demanding laboratory trace analysis environments and semiconductor chemical processing workflows with bespoke configurations available.

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Application	Description	Key Benefit
ICP-MS Sample Prep	Purification of nitric and hydrochloric acids for ultra-trace metal analysis in academic and commercial research labs.	Minimizes background interference and lowers detection limits for critical analytes.
Semiconductor Processing	Preparation of electronic-grade cleaning agents and etchants used in silicon wafer fabrication and microelectronics.	Ensures zero metallic contamination in sensitive semiconductor manufacturing stages.
Geochemical Isotope Analysis	Distillation of high-purity hydrofluoric acid for the digestion of complex geological and silicate rock samples.	Provides the extreme purity required for high-precision mass spectrometry isotope ratios.
Pharmaceutical Quality Control	Production of high-purity reagents for the testing of active pharmaceutical ingredients (APIs) and heavy metal compliance.	Meets stringent pharmacopeia standards for chemical purity and reagent consistency.
Environmental Monitoring	Purification of acids used in the analysis of trace pollutants in drinking water, soil, and atmospheric samples.	Enhances the reliability of long-term environmental data by reducing reagent-induced errors.
Forensic Science	Preparation of specialized cleaning solvents and reagents for high-sensitivity evidence analysis and toxicology.	Maintains the chain of custody for chemical purity in sensitive forensic investigations.

Category	Specification Detail
Product Item Number	PL-CP114
Primary Material	High-Purity Virgin PFA (Perfluoroalkoxy)
Auxiliary Components	PTFE (Polytetrafluoroethylene) / FEP components available
Purification Method	Surface-evaporation sub-boiling distillation
Maximum Continuous Runtime	Up to 48 Hours per cycle
Operating Temperature	Precision-controlled (Customizable based on acid type)
Distillation Capacity	Fully customizable based on user requirements
Compatible Reagents	HF, HNO3, HCl, H2O, and other mineral acids
Connection Interfaces	Custom PFA fittings and tubing (Standard or Bespoke)
Fabrication Process	Precision CNC Machining and Thermal Bonding
Dimensions	Custom-tailored to laboratory space constraints

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Power Requirements	Configurable for regional voltage and frequency	