

CETAC OmniPure™ Sub-Boiling Distillation System

Features and Benefits:

- All wetted parts composed of fluoropolymers (Teflon® PFA & FEP)
- Heating to 110°C
- Cooling system not required
- Programmable temperature settings
- Programmable time settings
- Automatic shutoff with double safety thermal control
- Electronics module separated from reagent environment
- Closed collection design
- Standard storage bottle used for collection
- Ease of disassembly for cleaning or exchange of still assembly
- Removable bottle rack with built-in spill tray



OmniPure™ Without Cover

The OmniPure™ Sub-Boiling Distillation System is a fully automated unit with all wetted parts composed of high-purity fluoropolymers such as PFA and FEP. The distillation assembly consists of a heated distillation container and a condensation chamber. The system incorporates an electronic control module that allows the user to program a specific method, defining the heating temperature and the distillation time. These features provide the user with control over reagent throughput and purity levels, as well as unattended operation and automatic shutoff. The control module is connected to the distillation unit by a power cable, allowing the user to operate the controller outside of the fume hood and away from corrosive liquids and vapors.

The OmniPure™ uses a closed design with a standard storage bottle for collection, eliminating potential contamination from open-air or transfer bottles. The system is designed for easy disassembly, cleaning, and exchange of still assemblies. A sliding bottle rack with a built-in tray provides further ease of use, while protecting against accidental liquid spillage.

Specifications:

Distillation Container: 1 Liter PFA jar, capacity of 500mL

Collection Container: 500mL PFA bottle

Dimensions:

Distillation Unit: 43.5cm (W) x 38.1cm (D) x 73.7cm (H)

Control Box: 16cm (W) x 22.1cm (D) x 11.5cm (H)

Total Weight: 21.1kg (46.4lbs)

Voltage: 100-240VAC, 50-60Hz, 7A

Temperature Range: 50° C to 110° C, increments of 1° C

Time Range: Up to 99 hours 59 minutes, increments of 1 minute

Throughput, 12 hours (70% HNO₃):

Temp (° C)	Volume (mL)
60	160
70	210
80	250
90	315
100	375



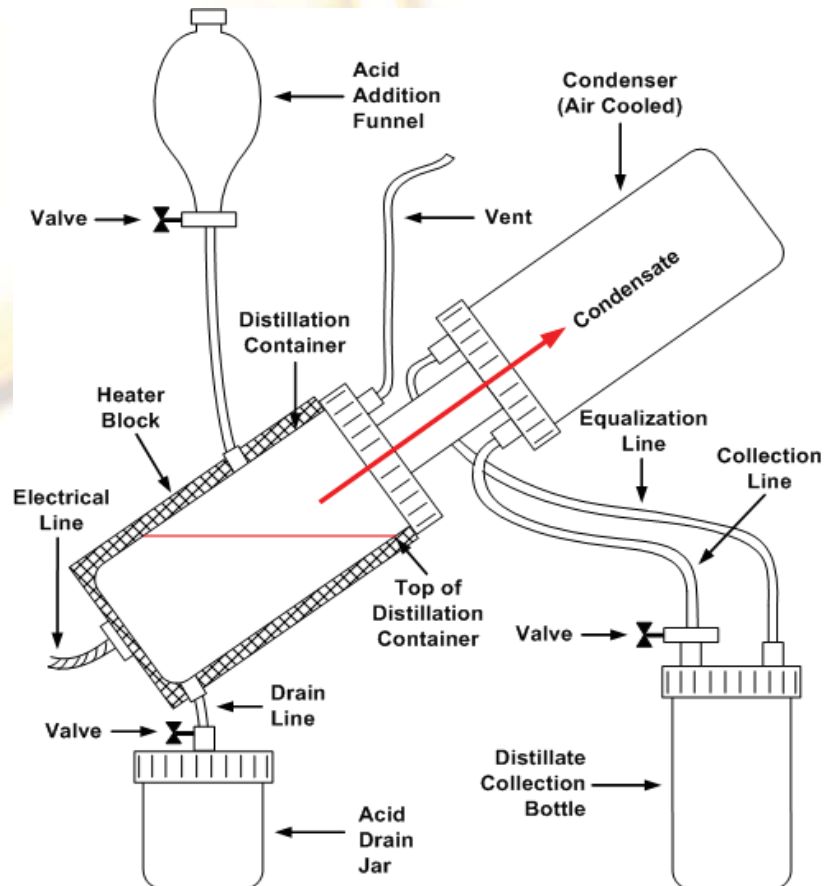


OmniPure™ With Cover

The table (right) lists measured (by ICP-MS) trace element concentrations before and after a 100°C distillation. Elements were spiked at 10µg/L in the original reagent grade HNO₃. Concentrations for many elements are below the detection limit. Note that the distillation was performed under non-cleanroom conditions.

Reagent Grade HNO ₃		
Element	Spike Conc. (µg/L)	After 100°C Distillation (µg/L)
Be	11.0	ND
Mg	11.1	0.06
Al	10.6	0.2
Ti	10.1	0.4
V	10.4	ND
Cr	12.5	ND
Mn	9.7	0.4
Co	9.4	0.01
Ni	10.1	ND
Cu	9.7	0.02
Zn	10.0	0.08
As	10.4	ND
Se	9.7	ND
Sr	9.3	ND
Mo	9.2	ND
Ag	9.4	0.007
Cd	9.3	ND
Sn	10.8	0.5
Sb	9.7	ND
Ba	9.5	0.01
Dy	9.3	ND
Tl	9.4	ND
Pb	9.5	0.004
U	9.4	ND

ND = Not detected



Schematic: The CETAC OmniPure™ Sub-Boiling Distillation System