

CleanAcids®

Purification system designed to obtain extra pure reagents from standard quality acids, essential for trace and ultra-trace analysis.



CleanAcids 1000 mL



CleanAcids 3-500 mL



CleanAcids 3-125 mL

Non contractual pictures

Acid inertness

The 400µm thick PFA coating on our devices offers protection from corrosion by aggressive reagents, ensuring that the **risk of contaminating your samples**, work spaces and clean rooms is eliminated. All devices have successfully passed acceptance testing cleanroom class1.

Performance

Perfect temperature uniformity across the heating surface; your reagents are purified at the same temperature and rate.

Reliability

The temperature controller, connected to the device by a 1.7m long cable (held inside a PFA tube), can be placed outside the fume hood for better protection and is **safe for continuous use**.

All heated parts are fully encased and impervious to attack by corrosive reagents, ensuring a **long, maintenance-free life**.

Flexibility

Our devices are offered in standard sizes and can also be **tailor-made to customer specifications**, depending on the available workspace and size of your vessels.

Functioning

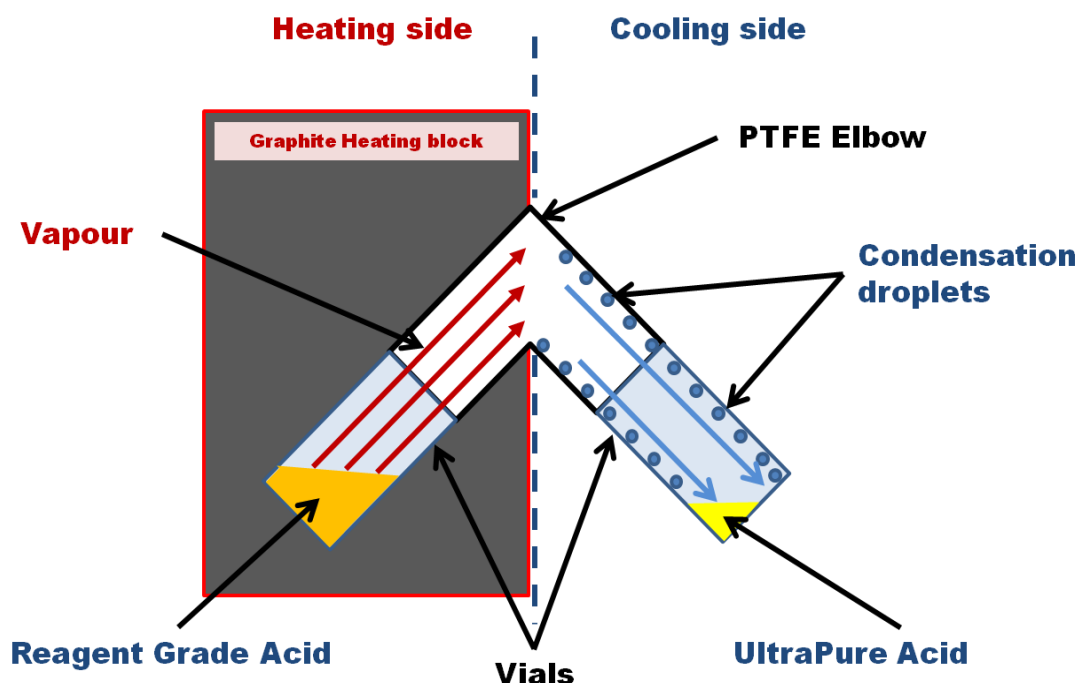
The purification of the reagent is held to a constant, uniform and controlled temperature. This temperature is slightly under the boiling point. The isolated vapors from the atmosphere are condensed, canalized and stored in the coldest part with no way back possible to the reagent to be purified.

With a unique and patented design, the CleanAcids® range is designed for wet laboratories which carry out chemical analysis. Its uniqueness is to be able to simultaneously purify different acids or solvents in a totally closed environment, without need of an external gas flow to carry out the vapor towards a condensation device.

CleanAcids® allows the production of ultrapure reagents from standard quality reagents. The purification of small volumes of reagents before the analysis avoids the risks of contamination which can happen during long term storage of your high purity reagents.

It purifies your reagents into concentrated solutions for less contamination of your sample and greatly reduces your cost analyzes related to the purchase of high-purity reagents (HCl, HNO₃, HBr, HF, HClO₄, NH₄OH, H₂O₂ ... H₂SO₄ (very low productivity)).

The purification stations, up to 12 per device, can treat volumes between 25 mL and 1L. The isolation stations are isolated from each other, which allow removing independently a container during the purification process.



Reminder: All **Analab** devices are made completely in inert to acid materials. They do not emit any particles that could contaminate the samples and the laboratory. The temperature homogeneity is perfect. All devices have successfully passed acceptance testing cleanroom class1.

Purification conditions for concentrated solutions of acids

For purification of concentrated acid solutions, it is recommended to evaporate solutions composition close to the azeotropic composition. The temperature of the heating block is fixed in relation to the boiling point of the mixture, 5°C below:

- | | |
|-----------------------------------|------------------------|
| - HCl : 20,2 % weight, | Boiling point : 110 °C |
| - HNO ₃ : 68 % weight, | Boiling point : 121 °C |
| - HF : 38 % weight, | Boiling point : 111 °C |
| - HBr : 49 % weight, | Boiling point : 126 °C |

Speed of purification: around 35mL/h

PS. because fluoropolymers are thermal insulators, you can adjust the set temperature to the boiling point of the acid to be purified and sometimes several degrees above, but you have to test.

For purification of solutions with concentration higher than the azeotropic composition, adapt an evaporation temperature significantly lower in adequacy with the equilibrium vapor diagram of the binary mixture acid/water.

Utilization

Wear protective gloves against heat when handling hot vials, jars and elbows.

Do not take support on the block during heating at risk of burns.

Be sure to condition elbows before first use.

Be sure to well condition vials and jars before use.

Containers are screwed firmly on the elbows without forcing which could damage the thread.

During the device's functioning, make sure there is no drop of reagent on the outside wall of the container, which would mean there is a leak (the container is not sufficiently screwed or the thread has been damaged).

Technical data

Reference	Length (mm)	Width (mm)	Height (mm) Feet included	Weight (kg)
CA-3.125mL	284	176	245	19
<i>Required space</i>	360	300	390	
CA-3.125+5.25	284	176	245	25
<i>Required space</i>	410	410	390	
CA-6.125mL	571	176	245	41
<i>Required space</i>	655	300	390	
CA-12.125mL	571	352	245	71
<i>Required space</i>	655	410	390	
CA-3.500mL	330	180	300	
<i>Required space</i>	386	236	416	
CA-1.1000mL	275	155	390	14
<i>Required space</i>	355	215	535	

Reference	Number of positions on the CA's side	Volume of vials and jars	Number of positions on the CA's top	Kit vessel corresponding
CA-3.125mL	3	125ml	6	3X KIT-VESSEL-25ML
CA-3.125+5.25	3 + 5	125ml + 25ml	14	3X KIT-VESSEL-125ML + 5X KIT-VESSEL-25ML
CA-6.125mL	6	125ml	12	6X KIT-VESSEL-125ML
CA-12.125mL	12	125ml	24	12X KIT-VESSEL-125ML
CA-3.500mL	3	500ml	6	3X KIT-VESSEL-500ML
CA-1.1000mL	1	1000ml	--	1X KIT-VESSEL-1L

Reference	Power	Amp for CleanAcids 230V	Amp for CleanAcids 110V
CA-3.125mL	2200 W	9.6 Amp	--
CA-3.125+5.25	2200 W	9.6 Amp	--
CA-6.125mL	3600 W	15.6 Amp	--
CA-12.125mL	3000 W	13 Amp	--
CA-3.500mL	2000 W	9 Amp	
CA-1.1000mL	1500 W	6.5 Amp	13.6 Amp

Temperature: 250°C maximum – Uniformity +/- 2°C
 Temperature rise: 6°C / minute
 Temperature drop: 1°C / minute

Material: PFA coated graphite

Warranty: 1 year for electronic and electric elements
 2 years for the graphite (under normal use, without putting on any sharp vessel)