

**TOMORROW  
LAB** SINCE 1945

75  
YEARS

**eppendorf**



# A guide to help you return back to the laboratory

As we are resuming work after the long lockdown, it is time to 'kick start' your safe and efficient return to the lab. The Eppendorf team would like to share some useful information to help you 'restart' your laboratory including guidance on cleaning and maintenance.

## Cleaning tasks

First of all, let's list down a few important cleaning tasks:

- Room sanitizing
- Dehumidification and ventilation
- Benches/ floor cleaning
- Instruments and tools for cleaning/disinfection:
  - > CO<sub>2</sub> incubator
  - > Centrifuges
  - > Pipettes
  - > Shakers

Let the Eppendorf Team provide some guidelines on how to clean different types of laboratory instruments quickly and effectively.

## Checklist before we start to clean:

- Gloves, face mask and goggles for your own protection
- Cleaning agents: soapy water or neutral detergent
- Disinfectant: 70% alcohol
- Lint-free cloths or other cleaning tools (do not use hard and metallic tools)
- Make sure the power of the device is turned off, disconnect the power of the device
- Do not allow liquid to contact any power socket or device, and prevent liquid from entering the sensor, probe and connection parts



# CO<sub>2</sub> Incubators



## 01 Dehumidification and cleaning of external surfaces

- Dehumidify the incubator in a ventilated room for 1-2 days if conditions permit
- Wipe the outer surface of the incubator using a soft cloth soaked in soapy water
- Rinse the outer surface of the incubator twice with clean water



## 02 Internal cleaning

- Follow the sequence:
  1. Take out the shelves, racks and water / humidity trays
  2. Wipe and clean the parts with sterile water
  3. Wipe the parts with disinfectant and then rinse with sterile water

To clean the incubator thoroughly, you will first need to remove all the internal parts. Pay extra attention to the sharp corners and hidden parts as they tend to gather dust and contaminants and could be challenging to clean. Having an incubator where internal parts can be removed easily and a smooth and seamless chamber with minimal internal parts will make your cleaning more efficient and effortless.

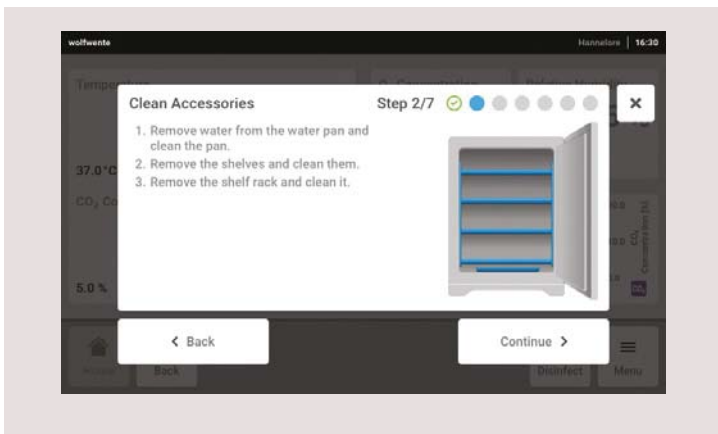


[Click to see video of cleaning and high temperature disinfection steps](#)



### 03 Internal sterilization

- Wipe the inside of the chamber again with the disinfectant and allow it to air dry naturally
- Perform disinfection e.g. ultraviolet (> 4 hrs) or high-temperature disinfection



The CellXpert® C170i CO<sub>2</sub> incubator comes with **high-temperature disinfection function at 180°C**. There is also intuitive and step-to-step guide via the touch screen display to guide you through the entire disinfection process.

This allows a smooth and easy disinfection procedure.

After the entire cleaning and disinfection process is completed, the the incubator will generate a **performance report**, which can be downloaded via USB and kept as a disinfection record file.



[Click here to learn how to correctly refill the water reservoir in your CO<sub>2</sub> Incubator and some Cell Culture Do's and Don'ts](#)

[Click to learn more about CellXpert® C170i CO<sub>2</sub> incubator](#)



# Centrifuges

## 01 Dehumidification and cleaning of external surfaces

- Dehumidify the centrifuge in a ventilated room for 1-2 days if conditions permit
- Wipe the outer surface of the centrifuge with a soft cloth and soapy water
- Rinse the soft cloth with clean water and wipe the outer surface of the centrifuge twice
- If it is a refrigerated centrifuge, clean out any debris and dust near the air inlet and exhaust vent using an electric blower. Use the warm air to remove dust and dehumidify the exhaust vent of the instrument



## 02 Internal cleaning

- Remove the buckets and rotor and clean them with a lint-free cloth and neutral detergent. Rinse with distilled water
- Use a lint-free cloth dipped in diluted neutral detergent to clean the centrifuge cavity and rotor shaft



## 03 Cleaning the internal parts and accessories

- Clean with 70% ethanol, wipe off excess disinfectant
- Leave the parts upside down on a clean and dry absorbent paper or cloth to dry
- If needed, autoclave rotor, rotor lids and buckets at 121°C, 20 min (Never use UV, beta, gamma radiation, or any high-energy radiation source)



Eppendorf rotors\*, buckets, and adapters are autoclavable and durable. Disinfection can be carried out regularly without worry of damaging the parts.

Click here to view [video](#) and [download](#) a centrifuge maintenance poster

*\*check with your Eppendorf representative*



# Shaker Incubators

## 01 External surface cleaning

- Ventilate the room where the shaker is located for 1-2 days if conditions permit.
- Use a soft cloth dampened with general lab detergent to wipe the outer surface of the shaker and a subsequent wipe with a cloth dampened with distilled water. Wipe the outer surface with a clean, dry cloth as the final step.
- Avoid contact of the disinfectant with the electronic circuit of the power socket and device.

## 02 Internal cleaning

- Remove all internal components such as platform and shaker accessories from the chamber, wipe them clean with detergent and follow by a final wipe with water. Do the same as above for the inner walls of the shaker and let it dry completely.
- If there are too many hidden edges and grooves that are difficult to reach, you can use an adhesive tape to adhere the contaminants onto the sticky surface to remove the contaminants



- Finally, after completing all the steps, re-assemble the components back to the original positions in the chamber and then turn on the power.

Click here to find out more about [Eppendorf Shaker Incubators](#)



# Pipettes

## Cleaning the Eppendorf Research® plus or Reference® 2 pipettes from contaminants like nucleic acid

The lower part of a pipette first needs to be disassembled. This can be done easily. You can watch the whole procedure on YouTube with the link below



 [Click to watch](#)

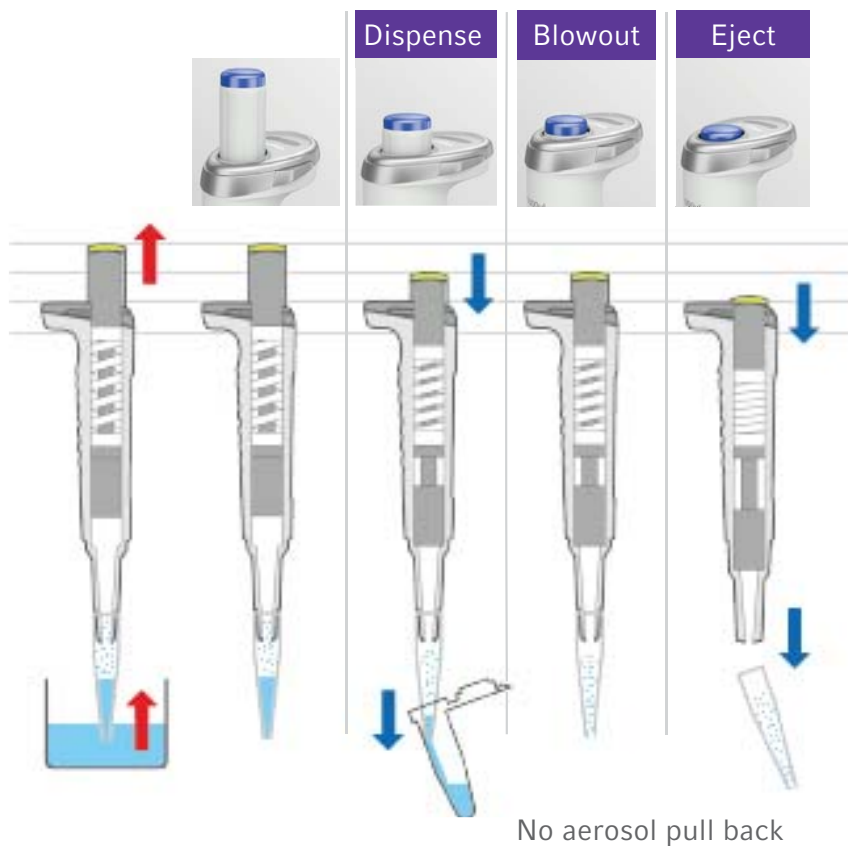
You can clean and disinfect the pipette with the following steps:

1. Surface clean the lower parts with a decontaminating agent like DNA AWAY™ or similar agents
2. Rinse with deionized water
3. Air dry or heat dry up to 60 °C
4. Lubricate pistons/seals
5. Re-assemble the pipette (follow the steps in the video)

## Disinfecting the Eppendorf Research® plus or Reference® 2 pipettes

With the Eppendorf manual pipettes, you can disinfect the pipettes without the need to disassemble it. Just autoclave the whole pipette at 121°C, 1 bar for 20 minutes. Then air dry or heat dry up to 60°C. Simple and easy!

The Reference® 2 manual pipette has an aerosol contamination prevention feature with its unique single-button design. With the single-button design, all pipetting and tip ejection steps are performed using just this button and because of this there won't be any aerosol pull back. The diagram below shows how this is achieved.



If your lab is brand new, you should also pay attention to the following points:

### A. Check before the device is powered on

- > Check whether the laboratory power supply is stable - switch on general electrical appliances (such as lights, microwave ovens, kettles, etc.) before switching on the laboratory instruments
- > Check whether the moving parts are in working condition (motor shaft) to prevent overload caused by rust
- > Lubricate the friction parts or sealing parts (rotor seals) to avoid cracks

### B. When running the device for the first time, start with an empty load to check whether the machine is working normally. Do not overload the machine.

For a more thorough check and cleaning of your Eppendorf instruments, why not go for our Back To The Lab Preventive Maintenance Promotion now? Contact us for more info.