

# ULT Freezer Maintenance

## Temperature conditions can affect your sample integrity & quality

- > Take care for temperature recovery and avoid high temperature fluctuation
- > Open the doors no longer than necessary (30 sec – 1 min)
- > Stay organized and use inventory management systems to minimize door-opening times
- > Utilize drawer racks instead of side access racks when frequently accessing the freezer
- > Completely fill your freezer; leave no empty space for the intrusion of warm and humid air
- > Keep your freezer away from heat sources (e.g. heat emitting devices like ovens, incubators, safety cabinets, sunny windows, heating elements, etc.)

## Minimize ice build-up for better performance and a higher life cycle of your ULT freezer

- > Install freezers in a well ventilated area with temperatures between 10 – 32 °C, ideally 18 – 20 °C
- > Leave a minimum clearance of 15 cm for air circulation and heat dissipation around the freezer in all directions
- > Maintain low humidity levels in the ambient environment
- > Regularly remove ice from the outer door gasket for better sealing
- > Defrost the inner doors by removing them so you can wash and dry them while freezer is still running
- > Brush off loose, soft snow with a hand brush
- > Keep the auto vent port free of ice and snow
- > Close the outer door properly

## Defrost your freezer

- > Switch off your freezer and disconnect it from the mains power for defrosting
- > Wear cold protection gloves
- > Collect and absorb defrost water run-off in the chamber and in front of the device
- > Wipe all surfaces with a soft, lint-free cloth
- > Outer surface, doors, and gaskets should be cleaned with a mild detergent
- > Do not use abrasive cleaners or solvents
- > All stainless steel parts can be disinfected with 70 % isopropyl alcohol
- > Dry the inner chamber, shelves, and doors; reinstall the inner doors and turn on the device



## Cleaning of air intake filter

- > Remove air filter behind the filter grille by turning screws ¼ time and open grille downwards, or by gently pulling down the under-mounted grille
- > Clean the dust by using a vacuum cleaner and/or by washing the filter in warm soapy water
- > Dry the filter completely before replacing
- > The filter must be cleaned regularly (ideally every quarter) to maintain air permeability for cooling the condenser
- > In dusty environments, it should be checked more often



Remove filter from behind the filter grill



Wash the filter with a mild detergent



Remove inner doors for convenient cleaning



Wipe the inner chamber using a soft, lint-free cloth



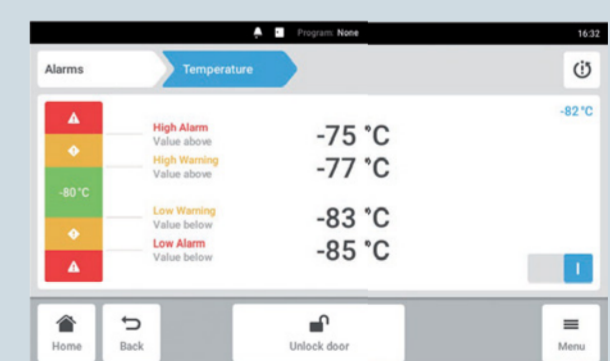
Wipe the inner doors and their seals



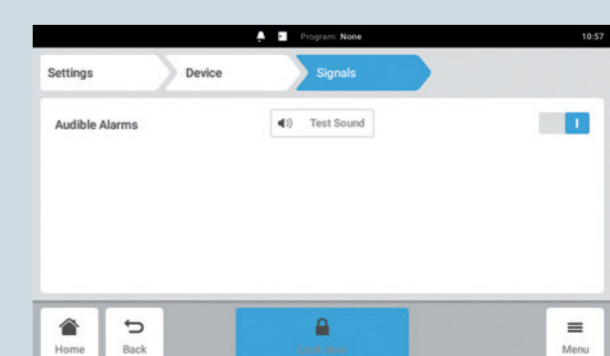
Wipe the outer door and its seal

## Check indicators

- > On standard devices, test alarm operation by pressing the alarm/mute button on the display – the audible alarm should sound and all LEDs should light together when the button is pressed
- > To test the audible alarm on devices with a touch screen, tap Menu > Settings > Device > Signals:
  - > To test the audible alarm, tap the test sound button
  - > To enable and disable the audible alarm, tap the OI switch
- > To check if alarms are enabled, tap Menu > Alarms, choose an alarm (e.g. Temperature) and be sure that the OI switch is activated



Check if alarms are enabled



To test the audible alarm, tap the test sound button



Touch screens can be cleaned by locking the screen: tap Menu > Clean Screen — the touch screen is now locked and ready for cleaning

## Cleaning the device

- > Remove the inner shelves and inner doors
- > Clean using a soft, lint-free cloth with water and mild cleaning reagent (do not use abrasive cleaners or solvents) and wipe the seals, the inner chamber, inner doors, outer door, shelves, other surfaces, and let dry completely
- > Clean the auto vent port by removing snow with a small brush
- > Devices with touch screens can be cleaned with locked screen. Tap Menu > Clean Screen – the touch is now locked. Moisten a soft cloth with cleaner or disinfectant (Ethanol 70 %, NaClO 1 %, Dismozon® pur, Hexaquart® S, or other suitable disinfectant) and wipe the screen. Unlock the screen by tapping the corners of the touch screen in the numbered sequence 1,2,3,4
- > All stainless steel parts (inner chamber and shelves) can be disinfected with 70 % isopropyl alcohol applied with a soft, lint-free cloth