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INSTRUMENT STANDARD OPERATING PROCEDURE MANUAL

College of Medicine



SAFETY AND LABORATORY COOMMITTEE, C.O.M, K.F.U.

Prepared by

Document Number	Name	Signature	Date
CM/HIS-015	MR. MOHAMMED AL HEJAB MR. ALI AL THANI		23/11/2020
Revision Number	Approved by		
R0	Dean: Department:		

Document History

Document Section	Details of Amendments	Date	Modified by (Initials)
SOP	First Draft on SOP for the operation of Fully automatic Glass Water Still – GFL2208	23/11/2020	

1. OBJECTIVE

- ☐ The document describes the operation of Fully automatic Glass Water Still – GFL2208.

2. SCOPE

- ☐ Produce ultra-pure, bacteria and pyrogen free distillate with a very low conductivity (approx 2.2 μS / cm at 20 °C).

3. RESPONSIBILITIES

- ☐ It is the responsibility of designated personnel in the lab to train staff and students on this procedure and to ensure adherence to this procedure under supervision.
- ☐ It is the responsibility of designated personnel (staff or Student) to follow the instructions of this procedure under supervision.

4. REFERENCES

- ☐ Fully Automatic Water still - GFL 2008 operating instructions manual.

5. DEFINITIONS

- ☐ Distillation capacity : 8 l / h mono distillate.
- ☐ Cooling water required: approx 144 l/h.
- ☐ Weight (net, with water filling): 24 kg.
- ☐ Electrical connection / Mains connection: 220V / 3 / PE, +/-10%
or 400V / 3 / N / PE, +/-10% 50....60Hz, 6,0kW.

6. SAFETY PRECAUTIONS

- Caution! Cooling water leaves the still with a temperature of up to 70°C.
Danger of scaldings!
- Caution! Distilled water leaves the still with a temperature of more than 90°C.
Danger of scaldings!
- Caution! Before servicing and maintenance always let the glass water still cool down!

Danger of scaldings!

PROCEDURE FOR OPERATING Fully automatic Glass Water Still

– GFL2208

6.1. Turning on the instrument:

- ☐ After switching the unit on via the main switch, not only the green pilot lamp in the main switch will glow, but also the pilot lamp for "low water"

6.2. The built-in solenoid valve is opened and releases the water supply to the boiler via the cooling coil of the condenser.

Software Operation.

6.3. Steps of the Procedure

- ☐ the water in the boiler will start to boil, steam will rise into the glass condenser and condenses on the cooling coil. The first of the distilled water can then be with-drawn from the distillate outlet tap of the Mono Water Stills.
- ☐ **Function "sterilising"** When pressing the key "sterilising", the raw water supply (cooling water) is cut off for a five minute sterilising period. The steam produced by the heating element is used to sterilise the pure water area (condenser) and is allowed to escape through a vent in the lid of the water.
- ☐ **Function "cleaning"** Depending on the contamination level of the inflowing water and the increasing contamination of the water in the boiler, a fully automatic rinsing process should be started by pressing key "cleaning". This function is also triggered when boiling contaminated water frothes in the boiler and comes into contact with the electrode in the boiler of the mono stage.
- ☐ During the rinsing process, the boiler is filled with water to its upper rim and then drained completely. The contaminated water flows off through the hose connection marked "contaminated water drain".

6.4. Turning off the Instrument

- ☐ Switch the unit off
- ☐ Allow the heating unit to cool down to room temperature.
- ☐ Turn off the main cooling water supply.

6.5. Warning

Warning of hot liquids and steam.

Warning of hot surfaces.
Warning of dangerous electrical voltage.

