



**Document Number:** SASoM/EQUIP/014.v2

**Title:** Use and Maintenance of the Heraeus 'HERAcell 150' CO<sub>2</sub> Incubator

**Version:** v2

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Valid to:	31/12/2022

SOP History		
Number	Date	Reason for Change
v1	01/01/2013	Original
V2	01/01/2018	Update

### 1.0 Purpose –

The purpose of this SOP is to outline the principles of the routine use and maintenance of the Heraeus HERAcell® 150 CO<sub>2</sub> Incubator in Laboratory 248 at the St Andrews School of Medicine (SASoM).

### 2.0 Scope –

This SOP applies to routine use and maintenance of the Heraeus HERAcell® 150 CO<sub>2</sub> Incubator within the SASoM.

### 3.0 Responsibilities –

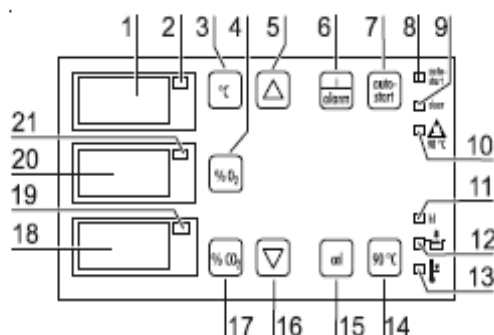
It is the responsibility of all users of the Heraeus HERAcell® 150 CO<sub>2</sub> Incubator within the SASoM to comply with this SOP.

### 4.0 Procedure –

#### Principles of Operation:

The CO<sub>2</sub> incubator is a laboratory device for preparing and cultivating cell and tissue cultures. The device allows the simulation of the special physiological ambient conditions for these cultures due to the exact control of: temperature, CO<sub>2</sub> content and the setting of an increased relative humidity.

## Equipment Operation Procedure



- [1] Temperature display
- [2] Heating LED
- [3] Key for setting temperature nominal value
- [4] Key for setting O2 nominal value
- [5] Key for increasing value

- [6] Key for reading failure codes/stopping acoustic alarm
- [7] Key for activating auto-start
- [8] LED for indicating active auto-start
- [9] LED for indicating door (open door)
- [10] LED for indicating active ContraCon decontamination routine
- [11] LED for indicating active low humidity
- [12] LED for indicating low water level
- [13] LED for indicating active over temperature protection
- [14] Key for starting ContraCon decontamination routine
- [15] Key for starting cal function
- [16] Key for reducing value
- [17] Key for setting CO2 nominal value
- [18] CO2 display
- [19] LED for indicating active CO2 gas supply
- [20] O2 display
- [21] LED for indicating active O2 gas supply

### Setting up the incubator:

Fill the water tray with up to max 3.0 l of processed water. Do not exceed the upper level mark.

Make sure that the CO<sub>2</sub> supply system valves are open, located on the wall behind the incubator.

Turn the device on using the power switch.

Set nominal values for temperature and CO<sub>2</sub> content at the operating panel.

Ventilate work space by leaving both device doors open until acoustic alarm sounds.

Start device using auto-start routine.

Close device doors.

The temperature control adjusts the temperature to the set nominal value, humidity rises.

When temperature and relative humidity are constant, the automatic adjustment of the CO<sub>2</sub> measuring system is performed.

The "auto-start" indicator goes off.

The CO<sub>2</sub> control supplies the set amount of CO<sub>2</sub>.

The device is ready for operation.



Incubating cultures:

Open the outer and inner doors.

Place plates/flasks/dishes on the shelves.

Close inner and outer doors

Door Switch:

A door switch is installed at the upper edge of the work space opening. If the door switch is activated by opening the glass door, the gas supply and the heating of the work space are interrupted and the display shows a corresponding message. If the door remains open for more than 30 seconds, a short acoustic alarm sounds. If the door remains open for more than 10 minutes, the acoustic alarm sounds continuously.

Tissue Culture Hood:

The incubator has a partnered tissue culture hood. This incubator hood partnership must be maintained for the life of that culture.

**5.0 Personal protection -**

Howie coat must be worn at all times.

Gloves as specified in the appropriate COSHH RA.

**6.0 Spillages -**

Identify the spill and determine appropriate response.

Spillages should be covered with disposable paper towels.

Disinfectant should be poured on the towel to soak them thoroughly.

Leave for a 10-15 minutes.

Place the contaminated material into an autoclave bag for autoclaving.

Wash the site of spillage with water & detergent.

**7.0 General maintenance -**

The incubator should be stripped down and cleaned on a monthly basis using Detergent and then 70% ETOH.

**8.0 Training -**

All users have to be trained before using the Instrument by a designated person.



## 9.0 Related documents –

- 9.1 Equipment manual
- 9.2 Equipment Maintenance Log
- 9.3 Equipment Maintenance Information sheet
- 9.4 Risk assessments – RA/GEN/021

## 10.0 Approval and sign off –

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Position: Research Fellow

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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