**Document Number:** **SASoM/EQUIP/088.v2**

**Title:** **Use and Maintenance of the Grant GD100 Water Bath**

**Version:** **v2**

**Author:** **Peter Mullen**

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| Effective from: | 12/03/19 |
| Valid to: | 11/03/24 |

| **SOP History** | | |
|---|---|---|
| Number | Date | Reason for Change |
| v1 | 12/03/2014 | Original |
| V2 | 12/03/2019 | Update |
| | | |



## 1.0 Purpose –

The purpose of this SOP is to outline the principles of the routine use of the Grant GD100 Water Baths in Laboratory 248 at the St Andrews School of Medicine (SASoM).

## 2.0 Scope –

This SOP applies to routine use and maintenance of the Grant GD100 Water Baths within the SASoM.

## 3.0 Responsibilities –

It is the responsibility of all users of the Grant GD100 Water Baths within the SASoM to comply with this SOP.

**4.0 Procedure –**

NB. This water bath is fitted with a float switch which serves as a protective device to switch off the water bath if the water level gets too low. The water bath must therefore always contain enough water to enable the float switch to activate. Water will need to be topped up if float switch is not activated.

A small volume of antibacterial fluid can be added to the water when filling the bath up in order to inhibit bacterial / fungal contamination.

Switch on and turn the Dial to the required temperature. The temperature of the water can be checked for accuracy using a conventional thermometer.

**GD100 can be pre-set to 3 programmed values –** see following downloaded instruction to pre-set 3 temperature values.


Fig. 1 Front Panel

3.1.4.1 Temperature display
The temperature display normally shows the temperature in C of liquid being controlled. It displays set temperature when the set button "S" is pressed. The display flashes to indicate that it is in "Set temperature" mode and will return to actual temperature after a few seconds.

3.1.4.2 Set temperature controls
Press "S" to change display from liquid temperature to set temperature, rotate the "Navigator" knob to set the required operating temperature. Increasing the speed of rotation of the knob increases the step size of the set temperature increment. The display flashes when in the set temperature mode. When the required temperature is indicated, press "S" again. This value is then stored in memory and the unit will retain this value after switch off.

**GD100 and GD120 (Fig. 2) Preset temperatures**

Setting preset temperature values
Press F, Rotate the "Navigator" knob until required pre set adjust number [t 1, t2 or t3] is indicated on the display. (The display will alternate between the 't' and the preset temperature). Press **S** Rotate the **Navigator** knob until desired temperature value is indicated on the display. Press **S**. Controller accepts this as current set temperature value and also stores it as a preset value. Running at preset temperature value Press F Rotate the set temperature control until required pre set number [t 1, t2 or t3] is indicated on the display. Press **S** Press **S** Controller accepts this as current set temperature.

Preset temperatures can be adjusted over full range of unit (-20° to 120°C), but will only be accepted when over 100°C if set to [oil] and below 100°C when set to low temperature liquid [LtL] When set to water [H2O], preset values greater than 100°C will revert to 100°C when **S** is pressed to leave preset menu.

Water baths should be cleaned out regularly.

Always unplug from the mains supply before emptying water and then clean the empty bath with water and wipe out with 70% Ethanol. Replace with water containing a small quantity of antibacterial fluid as previously described.

**5.0 Personal protection –**
Howie coat must be worn at all times.

**6.0 Training –**
All users have to be trained before using the Instrument by a designated person.

**7.0 Related documents –**

7.1 Equipment Manual – Grant GD100 Water Bath

## 8.0 Approval and sign off –

**Author:**

Name: Peter Mullen

Position: Research Fellow

Signature: Date:

**Management Approval:**

Name: Peter Mullen

Position: Research Fellow

Signature: Date:

**QA release by:**

Name: Alex MacLellan

Position: QA Manager

Signature: Date:

# STANDARD OPERATING PROCEDURE

Please sign below to indicate you have read this S.O.P and understand the procedures involved.

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