



# PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

## STANDARD OPERATING PROCEDURE

<b>Department:</b> Microbiology	<b>SOP No.:</b>
<b>Title:</b> Calibration of Water Bath	<b>Effective Date:</b>
<b>Supersedes:</b> Nil	<b>Review Date:</b>
<b>Issue Date:</b>	<b>Page No.:</b>

### 1.0 OBJECTIVE

To define the procedure to study the uniform temperature distribution in water bath.

### 2.0 SCOPE

This procedure is applicable to water bath, for ensuring uniform distribution of temperature in entire water bath, within acceptable limit.

### 3.0 RESPONSIBILITY

3.1 Doing : Technical Assistant

3.2 Checking : Executive/ Manager

### 4.0 ACCOUNTABILITY

Head of the Department

### 5.0 PROCEDURE

**Frequency: Every three month.**

5.1 Place the calibrated thermometer at 5 different location (i.e. four in corner one in centre of water bath) keeping in the stand as per location chart mentioned.

5.2 Switch "ON" the Instrument & set the temp as per SOP

5.3 Calibrate the water bath for three temp. set 45<sup>0</sup>C, 75<sup>0</sup>C & 90<sup>0</sup>C.

5.4 Set the temp at 45<sup>0</sup>C, when display shows 45<sup>0</sup>C temp, observe the temp on all thermometer & note the reading in Annexure. Take three reading of temp at every 10min interval.

5.5 Then set the temp. at 70<sup>0</sup>C & proceed as mentioned in 5.4.

5.6 Then set at 90<sup>0</sup>C temp. proceed as mentioned in 5.4.

5.7 After completion of calibration switch 'OFF' the instrument.

### 5.8 Acceptance Criteria :

The temperature shown on digital temp. indicator and on each of the 5 calibrated thermometer should not differ by more than  $\pm 3^{\circ}\text{C}$  from each other.



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### 6.0 ABBREVIATION

Temp = Temperature

Min = minute

$^{\circ}\text{C}$  = Degree centigrade



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### ANNEXURE I QC DEPARTMENT VALIDATION OF WATER BATH

S.No.	SET TEMPERATURE	TIME	THERMOMETER No.	LOCATION No.	TEMP. ON DISPLAY	TEMP ON THERMOMETER	DIFFERENCE IN TEMPERATURE	REMARK
1.								

**Acceptance criteria:** The difference in temperature should be within  $\pm 3^{\circ}\text{C}$ .