



**STANDARD OPERATING PROCEDURE**

<b>Department:</b> Microbiology	<b>SOP No.:</b>
<b>Title:</b> Operation and Calibration of Colony Counter	<b>Effective Date:</b>
<b>Supersedes:</b> Nil	<b>Review Date:</b>
<b>Issue Date:</b>	<b>Page No.:</b>

**1.0 OBJECTIVE**

1.1 To lay down the Procedure for operation and calibration of Colony Counter.

**2.0 SCOPE**

2.1 This procedure is applicable for Microbiology Laboratory.

**3.0 RESPONSIBILITY**

3.1 Microbiologist is responsible for operation of colony counter.

**4.0 ACCOUNTABILITY**

4.1 Head Microbiology

**5.0 EHS CONSIDERATIONS**

5.1 Use 70% IPA to disinfect your hands.

5.1.1 Do not open the lid of petriplate while counting on colony counter.

**6.0 PROCEDURE**

**6.1 Instrument Details:**

6.1.1 Make: Decibel Instruments

6.1.2 Instrument ID: .....

**6.2 Operation:**

6.2.1 Switch "ON" the mains switch of the instrument.

6.2.2 Digital display will show "000000", if the digital display is not showing "000000" then press the reset button, digital display will show "000000".



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- 6.2.3 Place a Petriplate on illuminating surface.
- 6.2.4 Adjust the magnifying glass to view a clear colony present on the petriplate.
- 6.2.5 Open the lid of marker pen and gently press the tip of the pen on the colony present in the petriplate.
- 6.2.6 A beep sound will confirm the recording and digital display will displays the number.
- 6.2.7 In this way, count all the colonies present in the petriplate.
- 6.2.8 Record the total number of colonies in the respective report and remove the plate from the platform.
- 6.2.9 Press the reset button and repeat the above procedure for all the petriplates.
- 6.2.10 After completion of work, press the reset button, switch "OFF" the mains.
- 6.2.11 Make an entry in the Annexure I.
- 6.3 **Calibration**
  - 6.3.1 Frequency of calibration quarterly.
  - 6.3.2 Place an empty Petriplate on the illuminating surface; adjust the magnifying glass to view the clear Petriplate.
  - 6.3.3 Press the tip of marker pen 5 times and then check the number displayed on screen, it should be 000005.



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- 6.3.4 Press the RESET button, the digital display will show “000000” again press the marker pen 10 times on surface of Petriplate.
- 6.3.5 Repeat the same procedure by pressing the marker pen 15 times, 20 times, 25 times and 50 times and 100 times.
- 6.3.6 Calibration of colony counter is valid if the number displayed on screen is equal to the number of time of marker pen pressed.
- 6.3.7 After completion of calibration, press the reset button, switch “OFF” the mains.
- 6.3.8 Put the “CALIBRATION” tag duly filled with necessary information.
- 6.3.9 Limits/ Acceptance Criteria: Calibration of colony counter is valid if the number displayed on screen is equal to the number of time of marker pen pressed.
- 6.4 **Cleaning:** Daily
- 6.4.1 Wipe the outer surface of the instrument with 0.2 $\mu$  filtered 70% IPA solution.

### 12.0 DEFINITIONS AND ABBREVIATIONS

- 12.1 IPA - Isopropyl alcohol

### 13.0 REFERENCE

- 13.1 NA

### 14.0 ANNEXURES

- 14.1 Annexure I: Colony counter usage record.  
14.2 Annexure II: Colony counter calibration record

### 15.0 DISTRIBUTION DETAILS

- 15.1 Controlled copy of this SOP shall be distributed to Quality Assurance and Microbiology department.



**PHARMA DEVILS**  
MICROBIOLOGY DEPARTMENT

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**16.0 REVISION HISTORY**

<b>Supersedes SOP No.</b>	<b>Change Control No.</b>	<b>Reason for revision</b>





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**ANNEXURE II**  
**COLONY COUNTER CALIBRATION RECORD**

<b>Instrument ID</b>	:		<b>Date of calibration</b>	:	
<b>Frequency</b>	:		<b>Next Due Date of calibration</b>	:	

S.No.	Numbers selected for calibration	Number of beep sound	Display Reading	Done by	Checked by
1.	05				
2.	10				
3.	15				
4.	20				
5.	25				
6.	50				
7.	100				

**REMARKS:** The above mentioned Colony Counter is calibrated / not calibrated as per specification.

Done By:

Reviewed By:

Date:

Date: