



STANDARD OPERATING PROCEDURE

Department: Microbiology

SOP No.:

Title: Calibration of Slit to Agar Air Sampler

Effective Date:

Supersedes: Nil

Review Date:

Issue Date:

Page No.:

1.0 OBJECTIVE

To describe the procedure for calibration of Slit – To – Agar air sampler.

2.0 SCOPE

This SOP is applicable for calibration of Slit – To – Agar air sampler installed in microbiology department.

3.0 RESPONSIBILITY :

3.1 Doing : Technical Assistant(QC)/Executive

3.2 Checking : Electrical Engineer (Eng. Dept.)

4.0 ACCOUNTABILITY :

Head of the department.

5.0 PROCEDURE

Frequency : Once in a year.

5.1 There are three levels, necessary to calibrate the Slit – To – Agar air sampler.

5.2 LEVEL – 1

5.2.1 Check calibration with air velocity.

5.2.2 Take sample of air and monitor its air velocity with anemometer and record 8 reading and take average.

5.2.3 Calculate volume in CFM by multiplying outer area with average air velocity.

5.2.4 Record the result in Annexure-I.

5.3 LEVEL – 2

5.3.1 This test calibration is accomplished by removing the battery voltage and replacing the battery with variable power supply, and observing at what voltage the low light illuminate.

5.3.2 The use of a fluke 73 series volt meter or equal is utilized to accomplish this task.



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5.3.3 The low voltage warning light should turn on at approximately $10.5V \pm 3\%$. Record test data in Annexure – I.

5.4 LEVEL – 3

5.4.1 General inspection of portable Slit – To – Agar air sampler light, switches, and battery should be done at this time and it should be noted in Annexure – I.

6.0 ABBREVIATIONS

% = Percentage

CFM = Cubic feet per minute

LPM = Litre per minute



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ANNEXURE-I QUALITY CONTROL LABORATORY

CALIBRATION OF SLIT – TO – AGAR AIR SAMPLER

REF. No. : _____
ISSUE DATE: _____
ISSUED BY : _____

PERFORMANCE DATE	DATE OF LAST PERFORMANCE DONE	NEXT DUE FOR PERFORMANCE

INSTRUMENT DETAILS		
INSTRUMENT NAME	INSTRUMENT MAKE	INSTRUMENT IDENTIFICATION NO.

OBSERVATION	
CALIBRATION METHOD : (LEVEL – I)	MODEL No : <input type="text"/>
METHOD : VELOCITY BY ANEMOMETER	SERIAL No : <input type="text"/>
INS.NAME : ANEMOMETER	

Reading. 1	<input type="text"/>	Reading. 5	<input type="text"/>
Reading. 2	<input type="text"/>	Reading. 6	<input type="text"/>
Reading. 3	<input type="text"/>	Reading. 7	<input type="text"/>
Reading. 4	<input type="text"/>	Reading. 8	<input type="text"/>

TOTAL AIR VELOCITY:

AVERAGE AIR VELOCITY **ft/min.**

DUCT AREA **Sq. Ft X AVERAGE VELOCITY** **ft/min.**

= TOTAL VOLUME **CFM.**
LPM.



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LIMIT: Total Air Volume, Should be equal. Or above 5 CFM or 141.5 LPM

**CALIBRATION METHOD : (LEVEL – II)
METHOD : VOLTAGE
INS.NAME : VOLTMETER**

MODEL No :

SERIAL No :

LEVEL – II (Voltage Check)

Voltage Reading. 1

Voltage Reading. 2

Voltage Reading. 3

TOTAL VOLTAGE

AVERAGE VOLTAGE

LIMIT : Voltage should be $10.5 \text{ V} \pm 3\%$.

LEVEL – III (General Inspection)

Check Slit – To – Agar. Lights, switches, and battery should in working condition.

ACCEPTABLE :

NOT ACCEPTABLE :

CONCLUSION

INSTRUMENT WORKING SATISFACTORY

INSTRUMENT NOT WORKING SATISFACTORY

PERFORMED BY

CHECKED BY

NAME

SIGN.

DATE

NAME

SIGN.

DATE

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