



PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Microbiology	SOP No.:
Title: Cleaning and Operation of Anaerobic Culture Jar	Effective Date:
Supersedes: Nil	Review Date:
Issue Date:	Page No.:

1.0 PURPOSE

To lay down the procedure for Operation of Anaerobic Culture Jar.

2.0 SCOPE

This is applicable to Quality Control Department.

3.0 RESPONSIBILITY

Microbiologist

4.0 PROCEDURE

- 4.1 Remove the cover and place it carefully on the bench with the catalyst sachet uppermost, to reduce the risk of its contamination.
- 4.2 Load the culture into the jar in their dishes or containers.
- 4.3 Replace the cover on the jar and secure it with the bridge clamp, finger tightening the bakelite knob.
- 4.4 Shut both needle valves.
- 4.5 In case you're using gas packs then follow the instructions as mentioned on the gas pack.
- 4.6 Open the vacuum needle valve, and allow the pressure in the jar to fall to or below 10 cm mercury. The cover will tend to pull down under vacuum.
- 4.7 Close the valve after adding the gas packs and remove both the hydrogen and vacuum connections.
- 4.8 Incubate the jar at 35°C to 37°C for the required period.
- 4.9 After incubation, remove the bridge clamp and open one of the needle valves so that any reduced pressure inside the jar will be released and the covered can be removed.



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- 4.10 The catalyst which is provided to catalyze the reaction between residual oxygen and added hydrogen normally remains active for long periods.
- 4.11 To activate the catalyst before a cycle, it should be heated in an oven for 90 minutes at 160°C.
- 4.12 **Lukas Type Indicator** :In 100 ml of distilled water add 1.5 agar agar, 2 gm Sodium teteraborate ($\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$), 500 mg Sodium Thio Glycolate, 2-4 drops of 1 % Methylene Blue, 1-2 drops of 1% Phenol red and autoclave. After autoclaving fill 2/3 of the tube with the indicators .cool and keep it in refrigerator until required.
- 4.13 Use the indicator by placing it in the culture jar with its open end uppermost. When oxygen is absent it reverts to its colorless form, when it is constantly blue, either the catalyst is inert or the cover is leaking.

5.0 ABBREVIATIONS AND DEFINITIONS

SOP	Standard Operating Procedure
Rev.	Revision
No.	Number
%	Percent
gm	Gram

6.0 REFERENCE DOCUMENTS

NA

7.0 ANNEXURE/ATTACHMENTS

None

8.0 REVISION LOG

Revision Number	Effective Date	Reason for Revision