



STANDARD OPERATING PROCEDURE

Department: Microbiology	SOP No.:
Title: Operation and Cleaning of Anaerobic Jar	Effective Date:
Supersedes: Nil	Review Date:
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1.0 OBJECTIVE:

To lay down a procedure for operation and cleaning of Anaerobic Jar.

2.0 SCOPE:

This SOP covers the procedure for operation and cleaning of Anaerobic Jar used in the Microbiology Laboratory.

3.0 RESPONSIBILITY:

Q.C - Microbiologist.

Head - Quality Control.

4.0 PROCEDURE:

4.1 Precaution

4.1.1 Ensure that all grease and organic solvents do not come in contact with the O-ring or a perfect seal may not be obtained. O-ring should be regularly inspected to make sure that no undue distortion has taken place, and should be replaced if there are any sign of splitting or other faults. The O-ring is placed over the jar and evenly pressed against the flange as a secure fit.

4.1.2 Keep away from all naked flame and sparking electrical equipment.

4.1.3 Do not autoclave the jar or lid, rack and tube holder may be autoclave.

4.1.4 Enter into Microbiology Laboratory by pushing the door.

4.2 Operating procedure

4.2.1 Place the Petri plates in the carrier. Disposable plastic Petri plates should be of the vented variety to aid gas transfer between the interior and exterior of the plates.

4.2.2 Cut open the Hi Media's Anaero indicator tablet sachet and remove one tablet pack. Insert the pack into the smaller clip on the plate carrier immediately

4.2.3 Lower the plate carrier into the polycarbonate base.

4.2.4 Place the lid on the base making sure that the O-ring is correctly in place. Apply the beam clamp. Screw down the Knurled wheel until tight.

4.2.5 Hi Media chucks have to be used for the evacuation replacement technique to enable a vacuum



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to be drawn. One chuck is fitted to the vacuum line and one to the gas supply by means of the clips provided. The input valve has a metal nozzle below the lid. The plastic tubing provided can be attached to the nozzle to ensure that incoming gas enters at the bottom of the jar to improve mixing of the hydrogen with residue oxygen.

- 4.2.6 Fit the chuck connected to the vacuum line to the valve marked vacuum as follows:
- 4.2.7 Depress the side arm on the chuck body and press the open end of the chuck firmly down on to the valve body.
- 4.2.8 While maintain a firm downward pressure on the body of the valve, release the side arm of the chuck. This will clip the chuck firmly and without leakage on to the valve.
- 4.2.9 Evacuate the system to about- 0.6 bar. The knurled wheel on the beam must not be further tightened if it appears loose.
- 4.2.10 After use, simply depress the side arm of the chuck and lift straight away from the valve in order to disconnect it. Observe the pressure gauge. A leakage jar will be detected at this stage because the vacuum reading will not remain constant.
- 4.2.11 Attach the chuck connected to the gas supply to the input valve of the jar. Run the gas mixture into the jar until the pressure is zero. Disconnect the chuck.
- 4.2.12 Observe pressure changes in the jar.
- 4.2.13 Release more gas mixture to the jar until the gauge reads zero. Disconnect the chucks. Incubate the jar at required time and temperature or appropriate for the organism being cultured.
- 4.2.14 The anaerobic indicator tablet will remain pink in the jar indicating anaerobiosis. Any kind of leakage leading to the aerobic condition will turn the colour of the tablet to purple.
- 4.2.15 After incubation the indicator tablet should be discarded.

4.3 Operating procedure For Gas Generating Kit

- 4.3.1 Place the Petri plates in the carrier. Disposable plastic petriplates should be of the vented variety to aid gas transfer between the interior and exterior of the plate.
- 4.3.2 Cut open the Hi Media's Anaero indicator tablet sachet and remove one tablet pack. Insert the pack into the smaller clip on the plate carrier immediately.
- 4.3.3 Lower the plate carrier into the polycarbonate base.
- 4.3.4 Read information on Anaerobic Gas Pack carefully. Cut off the top of any one required



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Anaerobic Gas Pack as indicated by the cut mark, remove sachet, place it in the lower clip of the plate carrier.

- 4.3.5 Place the lid on the base making sure that the O-ring is correctly in place. Apply the beam clamp. Screw down the Knurled wheel until tight.
- 4.3.6 The anaerobic indicator tablet will remain pink in the jar indicating anaerobiosis. Any kind of leakage leading to the anaerobic condition will turn the colour of the tablet to Purple.
- 4.3.7 After incubation the indicator tablet should be discarded.

4.4 Cleaning

- 4.4.1 Use 70% isopropyl alcohol disinfectant solution and sterile lint free cloth for cleaning.
- 4.4.2 After each use lid can be cleaned and dried with tissue paper.

5.0 ANNEXURE(S)

Nil

6.0 REFERENCE(S)

SOP: Preparation, Approval, Distribution control, revision and Destruction of Standard operating Procedure (SOP).

7.0 ABBREVIATION (S) /DEFINITION (S):

SOP – Standard Operating Procedure

REVISION CARD

S.No.	REVISION No.	REVISION DATE	DETAILS OF REVISION	REASON (S) FOR REVISION	REFERENCE CHANGE CONTROL No.
1	00	---	---	New SOP	---