

TMC 013 - ANAEROBIC JAR SYSTEM (3.5 Ltr) POLYCARBONATE JAR WITH STURDY, ALUMINIUM LID CLAMP AND SEALING RING WITH BUILT IN SAFETY FEATURES PETRI PLATE CARRIER, INDICATOR TABLETS & GAS PACK)

INTENDED USE

A system to provide anaerobic environment to bacteria.

COMPOSITION

TMC 001A – Polycarbonate jar
TMC 001B – Petri plate carrier
TMC 001C – Anaerobic indicator tablet
TMC 001D – Anaerobic gas pack

PRINCIPLE

Anaerobic jar system is simple to use system for generating an anaerobic environment necessary to cultivate anaerobic microorganisms within sealed jar. System consists of:

Polycarbonate jar: Polycarbonate jar is a multiple-use, self-contained system and works on the principle of evacuation and replacement, where the air inside the chamber is evacuated and replaced with mixture of gases (consisting of CO₂, H₂ and N₂). Polycarbonate Jar consists of jar of stout glass with a tight-fitting metal lid. The lid can be clamped airtight with a screw and is fitted with two tubes with taps, one for introduction of gas inside (inlet) and the other as outlet for vacuum valve.

Petri plate carrier: This carrier can accommodate up to 10 Petri dishes of 100 mm (4") diameter. Culture Tube Carrier This tube carrier can accommodate 8 Culture tubes.

Anaerobe Indicator Tablet: It is a sachet containing a tablet prepared from resazurin. It is for checking the anaerobic atmosphere in sealed containers used for incubation. The color change from pink to purple indicate aerobic conditions.

Anaerobic Gas-Pack: Gas-pack is a method used in the production of an anaerobic environment. It is used to culture bacteria which die or fail to grow in presence of oxygen (anaerobes). They are used to produce an anaerobic culture in microbiology. One sachet of Anaerobic Gas Pack is used for a 3.5 litre or smaller jar. For jars larger than 3.5 litres, use 2 to 3 sachets in proportion to the jar volume.

INSTRUCTIONS FOR USE

1. Place the petri dishes in the carrier which should be of the vented variety to aid gas transfer between the interior and exterior of the plates.
2. Insert Anaerobic Indicator Tablet into the smaller (upper) clip in the plate carrier
3. Put the loaded carrier into the polycarbonate jar
4. Remove the paper sachet from the foil bag. DO NOT open the paper sachet and immediately place the paper sachet into an anaerobic jar and close the jar lid. DO NOT have to add water or use a catalyst.
5. Place the lid fitted with accessories in the jar after making sure that the silicon „O^v”- ring is correctly placed on the jar. Apply the three-finger clamp and screw down until tight.
6. A metal accessory named as vacuum chuck have to be used for the Evacuation/ Replacement technique to enable first vacuum to be down.
7. Fit the vacuum chuck connected to the vacuum line to the valve marked as „vacuum” and press (not screw). The open end of the chuck firmly down on to the vacuum valve body. Screwing will damage the sealing rubber washer and cause the chuck to leak.
8. Evacuate the system to about -30 mm of Hg.



9. After use, simply lift the vacuum chuck straight away from the vacuum valve in order to disconnect it. Observe the pressure gauge. A leakage in the jar will be detected at this stage because the vacuum reading will not remain constant.
10. Attach the pressure chuck connected to the gas supply to the pressure valve of the jar. Run the gas mixture into jar until pressure is zero. Disconnect the pressure chuck.
11. Observe pressure changes in the jar.
12. Release more gas mixture to the jar until the gauge reads zero. Disconnect the pressure chuck. Incubate the jar.
13. The Anaerobic Indicator tablet will remain pink in the jar indicating anaerobiosis. Any kind of leakage leading to aerobic conditions will turn the colour of the tablets to purple.

PRECAUTIONS

1. The jar is designed to be used with anaerobe gas packs and must not be used with gas generating systems requiring the use of catalyst which without catalyst would result in a potentially explosive H₂/O₂ gas mixture.
2. The jar should not be autoclaved
3. Anaerobic Indicator Tablet used only for in vitro Diagnostic.
4. Do not take out the Anaerobic Indicator tablet from the transparent cover.
5. Oxygen absorption starts immediately when the aluminum bag of anaerobic gas pack is opened. After opening the aluminum bag, cover up the jar quickly (within one minute for Jar)
6. When using more than one sachet of anaerobic gas pack is used per jars, DO NOT pile sachets on top of each other.
7. Used anaerobic gas pack sachet may generate heat because of their residual reactivity. Discard all sachets after they become cool. DO NOT throw sachets away with combustibles.
8. Use Anaerobic Gas Pack for cultivation under conditions of less than 45°C (113°F).
9. The interior of the lid and jar should be kept free of dust.

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

