Directions for use in Evacuation/Replacement Technique

Precautions:
1. Place the Petriplates in the carrier. Disposable plastic Petriplates should be of the vented variety to aid gas transfer between the interior and exterior of the plates.
2. Cut open HiMedia’s Anaero Indicator Tablet Sachet (LE001B) and remove one tablet pack. Insert the pack into the smaller (upper) clip on the Petri plate carrier immediately.
3. Lower the plate carrier into the Polycarbonate base.
4. Place the lid on the base making sure that the O-ring is correctly in place (evenly pressed against the flange as a secure fit). Apply the beam clamp. Screw down the knurled wheel until tight.
5. HiMedia chucks have to be used for the Evacuation/Replacement Technique to enable a vacuum to be drawn. One chuck is fitted to the vacuum line and one to the gas supply by means of the clips provided. The ‘inside’ valve has a metal nose below the lid. The ‘Outside’ valve has a metal nose at the nose of the chuck to lock. While maintaining a firm downward pressure on the body of the valve, release the side arm of the chuck. This will clip the chuck firmly and leak free against the valve.
6. Evacuate the system to about -0.6 bar pressure. The knurled wheel on the base has to be further tightened if it appears loose.
7. 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 leaking jar will be detected at this stage because the vacuum reading will not remain constant.
8. 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.

Disinfection Method

ON NO ACCOUNT SHOULD THE LID BE AUTOCLAVED
It may be cleaned by swabbing carefully with 70% alcohol. If more extensive disinfection is required, 20 m l of 10% v/v formalin solution can be added to the jar and the anaerobic system is incubated at 37°C overnight. Sodium hypochlorite or strong detergent solutions should be avoided.

Care of Anaerobic Jar

1. 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 tablets to purple.
2. After incubation the Indicator tablet should be discarded with the normal laboratory litter.
3. The interior of the lid and jar should be kept free of dust.

Precautions:
- Do not connect directly to high pressure gas cylinders. Always use an intermediate pressure system e.g. a medium size culture container filled with H. and CO gas mixture is flammable and appropriate precautions should be taken.

Disinfection Method

1. Remove the Anaerobic Indicator Tablet Sachet from the Polycarbonate base. Insert the pack into the smaller (upper) clip on the Petri plate carrier immediately.
2. Place the Petriplates in the carrier. Disposable plastic Petriplates should be of the vented variety to aid gas transfer between the interior and exterior of the plates.
3. Cut open HiMedia’s Anaero Indicator Tablet Sachet (LE001B) and remove one tablet pack. Insert the pack into the smaller (upper) clip on the Petri plate carrier immediately.
4. Lower the plate carrier into the Polycarbonate base.
5. Place the lid on the base making sure that the O-ring is correctly in place (evenly pressed against the flange as a secure fit). Apply the beam clamp. Screw down the knurled wheel until tight.
6. Fit the chuck connected to the vacuum line to the valve marked ‘Vacuum’ as follows: Depress the side arm on the chuck body and PULL out scored the open end of the chuck firmly down on to the valve body. Screwing will damage the metal nose washer and cause the chuck to leak. While maintaining a firm downward pressure on the body of the valve, release the side arm of the chuck. This will clip the chuck firmly and leak free against the valve.
7. Evacuate the system to about -0.6 bar pressure. The knurled wheel on the base has to be further tightened if it appears loose.
8. 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 leaking jar will be detected at this stage because the vacuum reading will not remain constant.
9. 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.

An aerobic jar

- These special heavy duty valves have spring loaded cores fitted with a stainless steel spring, with a butile rubber valve seat and sealing ring. The valve is always closed until the shielded valve core is depressed. The valves can only be used in conjunction with HiMedia chucks. When a chuck is attached to the valve, both the airway of the chuck and the valve are fully open and allow gas to flow in either direction. Immediately the chuck is detached from the valve, the valve sealed - the chuck itself is also self-sealing when detached from the valve.

Precautions:
- Do not connect directly to high pressure gas cylinders. Always use an intermediate pressure system e.g. a medium size culture container filled with H. and CO gas mixture is flammable and appropriate precautions should be taken.
Anaerobic Systems (3.5 litres) – Mark II & Mark III

- **L9020 — Anaerobic System Mark II**
  - **Product Specifications:**
    - Transparent, unbreakable Poly-carbonate jar: 1 unit
    - Sturdy Cast Aluminium lid: 1 unit
    - Nitrile Rubber Sealing O-ring: 1 unit
    - Other Accessories Available:
      - Petriplate Carrier (SS) (LE001D) — 1 unit
      - Nitrile Rubber Sealing O-ring: 1 unit

- **L9030 — Anaerobic System Mark III**
  - **Product Specifications:**
    - Transparent, unbreakable Poly-carbonate jar: 1 unit
    - Sturdy Cast Aluminium lid: 1 unit
    - Nitrile Rubber Sealing O-ring: 1 unit
    - Other Accessories Available:
      - Petriplate Carrier (SS) (LE001E) — 1 unit
      - Nitrile Rubber Sealing O-ring: 1 unit

**Anaerobic Gas Production Systems**

- **LE002A Anaerobic Gas Pack 3.5L**
  - This is a disposable oxygen absorbing and carbon dioxide generating agent for use in anaerobic jars.
  - No catalyst or pressure gauge is necessary for this pack since no gas pressure is generated.
  - Packed 5 sachets per box.

- **LE002F Anaerobic Gas Pack 1.5L**
  - This is a disposable oxygen absorbing and carbon dioxide generating agent for use in anaerobic jars.
  - No catalyst or pressure gauge is necessary for this pack since no gas pressure is generated.
  - Packed 5 sachets per box.

**O-Ring**

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

**Anaerobic Gas Indicators**

For anaerobic systems, it is essential to confirm anaerobic conditions inside the jars. The following indicators can be used:

- **LE001B Anaerobic Indicator Tablet**
  - This is a disposable oxygen absorbing and carbon dioxide generating agent for use in anaerobic jars.
  - No catalyst or pressure gauge is necessary for this pack since no gas pressure is generated.
  - Packed 1 box.

**Anaerobic Systems (1.5 litres) – Mark V & Mark VI**

- **L9002 — Anaerobic System Mark V**
  - **Product Specifications:**
    - Transparent, unbreakable Poly-carbonate jar: 1 unit
    - Nitrile Rubber Sealing O-ring: 1 unit
    - Other Accessories Available:
      - Test Tube Carrier (SS) (LE001E) — 1 unit
      - Anaerobic Indicator Tablet (LE001B) — 1 box

- **L9020 — Anaerobic System Mark V**
  - **Product Specifications:**
    - Transparent, unbreakable Poly-carbonate jar: 1 unit
    - Sturdy Cast Aluminium lid: 1 unit
    - Nitrile Rubber Sealing O-ring: 1 unit
    - Other Accessories Available:
      - Petriplate Carrier (SS) (LE001D) — 1 unit
      - Anaerobic Indicator Tablet (LE001B) — 1 box

**Anaerobic Gas Production Systems (Mark V & Mark VI)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Product</th>
<th>Packing</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE002A</td>
<td>Anaerobic Gas Pack 3.5L</td>
<td>5 no</td>
</tr>
<tr>
<td>LE002F</td>
<td>Anaerobic Gas Pack 1.5L</td>
<td>5 no</td>
</tr>
</tbody>
</table>

Gas Mixture to be used in conjunction with the Gas Generating Kit, i.e., obtaining anaerobic environment through the use of the range of AnaeroGas Packs (LE002A, LE002F) for Mark II & Mark V systems.

1. Place the Petriplates in the carrier.

2. Cut open HiMedia’s Anaero Indicator Tablet sachet (LE001B) and remove one tablet pack. Insert the pack into the smaller (upper) clip on the plate carrier immediately.

3. A pressure valve, a safety valve (set to 1 kg pressure), two-way pressure gauge, and on top of the jar is placed.

4. Incubate at the desired temperature.

5. After incubation the Anaerobic Indicator tablet may be discarded with the normal laboratory litter. The exhausted AnaeroGas Pack sachet should be removed without spilling the contents and discarded carefully as per instructions printed on the AnaeroGas Pack cover.
Anaerobic Systems (3.5 litres) – Mark II & Mark III

Product Specifications:
- Transparent, Unbreakable Polycarbonate jar - 1 unit
- Sturdy Cast Aluminium Lid - 1 unit
- Nitrile Rubber Sealing O-ring - 1 unit
- Petriplate Carrier (SS) (LE001F) - 1 unit
- Anaero Indicator Tablet (LE001B) - 1 box

Other accessories available:
- Petriplate Carrier (SS)(LE001E) - 1 unit
- Test Tube Carrier (SS)(LE001E) - 1 unit
- AnaeroGas Pack (LE002F)* - 1 unit

* : Shelf life - 1 year

Instructions for use:
1. Place the Petriplates in the carrier.
2. Insert the Petriplates in the Petriplate Carrier (SS) (LE001F).
3. Place the material for incubation and seal the anaerobic jar according to directions for use. It may take a few hours for the tablet to turn completely pink to indicate anaerobic conditions inside.

Important:
- Place the Petriplates in the carrier.
- The O-ring is placed over the top of the jar and evenly pressed against the flange as a secure fit.
- Place the lid on the base making sure that the O-ring is correctly in place (evenly pressed against the flange as a secure fit). Apply the beam clamp. Screw down the knurled wheel until tight.
- 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 tablets to purple.
- The exhausted AnaeroGas Pack sachet should be removed without spilling the contents and discarded carefully as per instructions printed on the AnaeroGas Pack cover.

For various AnaeroGas Pack systems available, please refer the Table under heading Anaerobic Gas Production Systems (Mark II / Mark V).

Anaerobic Systems (1.5 litres) – Mark V & Mark VI

Product Specifications:
- Transparent, Unbreakable Polycarbonate jar - 1 unit
- Sturdy Cast Aluminium Lid - 1 unit
- Nitrile Rubber Sealing O-ring - 1 unit
- Petriplate Carrier (SS) (LE001D) - 1 unit
- Anaero Gas Production Systems (Mark II / Mark V)

Other accessories available:
- Transparent, Unbreakable Polycarbonate jar - 1 unit
- Sturdy Cast Aluminium Lid - 1 unit
- Nitrile Rubber Sealing O-ring - 1 unit
- Petriplate Carrier (SS)(LE001E) - 1 unit
- Anaero Indicator Tablet (LE001B) - 1 box

Instructions for use:
1. Place the Petriplates in the carrier.
2. Insert the Petriplates in the Petriplate Carrier (SS) (LE001F).
3. Place the material for incubation and seal the anaerobic jar according to directions for use. It may take a few hours for the tablet to turn completely pink to indicate anaerobic conditions inside.

Important:
- Place the Petriplates in the carrier.
- The O-ring is placed over the top of the jar and evenly pressed against the flange as a secure fit.
- Place the lid on the base making sure that the O-ring is correctly in place (evenly pressed against the flange as a secure fit). Apply the beam clamp. Screw down the knurled wheel until tight.
- 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 tablets to purple.
- The exhausted AnaeroGas Pack sachet should be removed without spilling the contents and discarded carefully as per instructions printed on the AnaeroGas Pack cover.

For various AnaeroGas Pack systems available, please refer the Table under heading Anaerobic Gas Production Systems (Mark II / Mark V).

Directions for use with the Gas Generating Kit, i.e., obtaining anaerobic environment through the use of the range of AnaeroGas Packs (LE002A, LE002F) for Mark II & Mark V systems:
1. Place the Petriplates in the carrier.
2. When disposable plastic Petriplates are used then they should be of the vented variety to aid gas transfer between the interior and exterior of the Petriplates.
3. Cut open Willmera’s Anaerobic Indicator Tablet sachet (LE003) and remove one tablet pack. Insert the pack into the smaller (upper) clip on the plate carrier immediately.
4. Lower the plate carrier into the Polycarbonate base.
5. Place the lid on the base making sure that the O-ring is correctly in place (evenly pressed against the flange as a secure fit). Apply the beam clamp. Screw down the knurled wheel until tight.

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 tablets to purple.

For various Anaerobic Gas Pack systems available, please refer the Table under heading Anaerobic Gas Production Systems (Mark II / Mark V).

Anaerobic Gas Production Systems

For Anaerogas Pack systems available, please refer the Table under heading Anaerobic Gas Production Systems (Mark II / Mark V).

Code | Product | Packing | Price
--- | --- | --- | ---
LE002A | AnaeroGas Pack 3.5L | 5 no | 5 no
LE002F | AnaeroGas Pack 1.5L | 5 no | 5 no

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

Instructions for laboratories possessing Willmera’s Anaerobic Systems – Mark II (LE003) / Mark V (LE004) using a sturdy Cast Aluminium lid with pressure vacuum gauge and safety valve. The following alternative may also be available to you.

Anaerobic Gas Production Systems (Mark II / Mark V)

For various Anaerobic Gas Pack systems available, please refer the Table under heading Anaerobic Gas Production Systems (Mark II / Mark V).

Gas Methane to be used in conjunction with the ‘Evacuation Replacement Technique’ for obtaining anaerobic environment. This should be a mixture of 50% H2 and 100% CO2, or for safer operation, 80% H2, 10% N2, and 10% CO2, which is to be prepared in your own laboratory.

Because of the low concentration of hydrogen present in a gas phase H2, CO2 mixture, double evacuation technique is recommended. This is carried out by evacuating the system to about -0.6 bar. Run gas mixture into the jar until the pressure is zero and immediately evacuate the system a second time to about -0.6 bar. Run gas mixture into the jar again until the pressure is zero. Disconnect the chuck.
Anaerobic Systems (3.5 litres) – Mark II & Mark III

**Anaerobic System Mark II**

- **Product Specifications:**
  - Transparent unbreakable Polycarbonate jar - 1 unit
  - Sturdy Cast Aluminium Lid - 1 unit
  - Sturdy Cast Aluminium Clamp - 1 unit
  - Nitrile Rubber Sealing O-ring - 1 unit

**Anaerobic System Mark III**

- **Product Specifications:**
  - Transparent unbreakable Polycarbonate jar - 1 unit
  - Sturdy Cast Aluminium Lid with Pressure Vacuum Gauge - 1 unit
  - Built-in safety valve and 2 way pressure gauge
  - Nitrile Rubber Sealing O-ring - 1 unit

**Other accessories available:**

- Petriplate Carrier (SS) (LE001F) - 1 unit
- AnaeroGas Pack 3.5L (LE002A) - 1 unit
- Anaero Indicator Tablet (LE001B) - 1 box

**Anaerobic Gas Production Systems**

For AnaeroGas Pack systems available, please refer the table under heading Anaerobic Gas Production Systems (Mark II / Mark V).

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**Anaerobic Systems (1.5 litres) – Mark V & Mark VI**

**Anaerobic System Mark V**

- **Product Specifications:**
  - Transparent unbreakable Polycarbonate jar - 1 unit
  - Sturdy Cast Aluminium Lid - 1 unit
  - Pressure Gauge - 1 unit
  - Nitrile Rubber Sealing O-ring - 1 unit

**Anaerobic System Mark VI**

- **Product Specifications:**
  - Transparent unbreakable Polycarbonate jar - 1 unit
  - Sturdy Cast Aluminium Lid - 1 unit
  - Pressure Gauge - 1 unit
  - Nitrile Rubber Sealing O-ring - 1 unit

**Other accessories available:**

- Petriplate Carrier (SS) (LE001F) - 1 unit
- AnaeroGas Pack 1.5L (LE002F) - 1 unit
- Anaero Indicator Tablet (LE001B) - 1 box

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**Anaerobic Gas Production Systems (Mark II / Mark V)**

**Code**

<table>
<thead>
<tr>
<th>Code</th>
<th>Product</th>
<th>Packing</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE002A</td>
<td>AnaeroGas Pack 3.5L</td>
<td>5 no</td>
</tr>
<tr>
<td>LE002F</td>
<td>AnaeroGas Pack 1.5L</td>
<td>5 no</td>
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</tbody>
</table>

**O-Ring**

Care should be taken that gauze and organic solvents do not come in contact with the O-ring or a perfect seal may not be obtained. O-rings should be regularly inspected to make sure that no rubber distortion has taken place, and should be replaced if there are any signs of splitting or other faults. The O-ring is placed over the top of the jar and evenly pressed against the flange as seen in fig. 1.

Instruments for laboratories possessing WATERS’s Anaerobic System - Mark II (LE003, LE012A), Mark V (LE012A) having sturdy Cast Aluminium lid with pressure vacuum gauge and safety valve. The following alternative may also be available to you.

**Directions for use:**

1. Place the Petriplates in the carrier. When disposable plastic Petriplates are used then they should be of the vented variety to aid gas transfer between the interior and exterior of the plates.
2. Cut open HiMedia’s Anaero Indicator Tablet sachet (LE001B) and remove one tablet pack. Insert the pack into the upper clip on the plate carrier immediately.
3. Place the Petriplates in the carrier. When disposable plastic Petriplates are used then they should be of the vented variety to aid gas transfer between the interior and exterior of the plates.
4. Incubate at the desired temperature. Important:
   - 1. Anaerobic jar: A transparent unbreakable Polycarbonate jar of 3.5 litres / 1.5 litres capacity along with a sturdy Aluminium lid (Mark II, Mark III / Mark V, Mark VI) assembly as follows:
   - 2. A sturdy Aluminium lid, a sturdy metal beam clamp, and 1-Nitrile rubber sealing O-ring.
   - 3. A pressure valve, a safety valve (set to 1 kg pressure), two-pressure absorbing packs.
   - 4. A dual purpose O2 absorbing and CO2 generating pack: AnaeroGas Pack 3.5L (LE002A) for Mark II, AnaeroGas Pack 1.5L (LE002F) for Mark V.
   - 5. A dual purpose O2 absorbing and CO2 generating pack: AnaeroGas Pack 1.5L (LE002F) for Mark V.
   - 6. 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 tablets to purple.
   - 7. After incubation the Anaerobic Indicator tablet may be discarded with the normal laboratory litter. The exhausted AnaeroGas Pack sachet should be removed without spilling the contents and discarded carefully as per instructions printed on the AnaeroGas Pack cover.

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**Anaerobic Gas Production Systems**

Precise and easy to operate AnaeroGas Packs as per user requirement!

**For AnaeroGas Pack systems available, please refer the Table under heading Anaerobic Gas Production Systems (Mark II / Mark V).**

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**Gas stirrer to be used in conjunction with the ‘Replacement Technique’ for obtaining anaerobic environment.**

- This should be a mixture of 90% H2 and 10% CO2, or for safer operation, 85% H2, 10% N2, and 5% CO2, which is to be prepared in your own laboratory.
- Because of the low concentration of Hydrogen present in a gas, CO2 and H2, mixture, double evacuation technique is recommended. This is carried out by evacuating the system to about -0.6 bar. Run gas mixture into the jar until the pressure is zero and immediately evacuate the system a second time to about -0.6 bar. Run gas mixture into the jar again until the pressure is zero. Disconnect the chuck.
Directions for use in Evacuation/Replacement Technique

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

2. Place the lid components of the vented variety to aid gas transfer between the interior and exterior of the plates.

3. Lower the plate carrier into the Polycarbonate base.

4. Insert the pack into the smaller (upper) clip on the plate carrier immediately.

5. Place the lid on the base making sure that the O-ring is correctly in place (evenly pressed against the flange as a secure fit). Apply the beam clamp. Screw down the knurled wheel until tight.

6. Fit the chuck connected to the vacuum line to the valve marked ‘Vacuum’ as follows:
   - Depress the side arm on the chuck body and PRESS (not screw) the valve, release the side arm of the chuck. This will clip the chuck firmly and without leakage to the valve.

7. Evacuate the system to about -0.6 bar pressure. The knurled wheel on the beam must not be further tightened if it appears loose.

8. After use, simply depress the side arm of the chuck and lift it straight away from the valve in order to disconnect it. Observe the pressure gauge. A leaking jar will be detected at this stage because the vacuum reading will not remain constant.

9. 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. Incubate the jar.

10. Observe pressure changes in the jar.

11. Release more gas mixture to the jar until the gauge reads zero. Disconnect the chuck. Incubate the jar.

12. 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 tablets to purple.

13. After incubation the Indicator tablet should be discarded with the normal laboratory litter.

14. The interior of the lid and jar should be kept free of dust. Plastic dust caps are provided to prevent dust particles entering the valve core and possibly interfering with a flawless operation of the spring mechanism.

Precautions:
- Do not connect directly to high pressure gas cylinders. Always use an intermediate pressure system e.g. a reducing valve or rubber bladder. The gas mixture is flammable and appropriate precautions should be taken. Keep away from all naked flames and sparking electrical equipment.

Dust Caps:
- HiMedia chucks have to be used for the Evacuation/Replacement Technique to enable a vacuum to be drawn. One chuck is fitted to the vacuum line and one to the gas supply by means of the clips provided. The ‘Vacuum’ valve has a metal retaining bolt to aid extraction. The retaining bolt provided can be attached to the metal core to ensure that incoming gas enters at the bottom of the jar to improve mixing of the hydrogen with the residual oxygen.

General Notes
- On NO ACCOUNT SHOULD THE LID BE AUTOCLAVED. It may be cleaned by swabbing carefully with 70% alcohol. If more extensive disinfection is required, 20 ml of 10% v/v formalin solution can be added to the jar and the anaerobic system is incubated at 37°C overnight. Surgery grade alcohol or strong phenol solutions should be avoided.

Evacuation Technique
- Each HiMedia Polycarbonate base and lid assembly has been checked and pressured-tested before despatch. On receipt, and in routine use, the lid components should be checked to ensure that they are screwed securely into the lid and that no damage has occurred to the face of the gauge. In case of LE003 (Mark III)/ LE013 (Mark VI), the safety valve is preset to vent at 0.7 bar, and it will automatically reseal after venting. After each use the jar can be cleaned and dried with soft tissue, taking care not to scratch the surface coating. The jars are best stored open, with the lid inverted, in a warm dry place. Care must be taken to prevent contamination by dust. It is good practice to label both lid and base so that a check can be kept on the performance of the individual components.

Anaerobic Systems
- Anaerobic Systems are designed to maintain anaerobic conditions in the presence of high oxygen levels by means of a valve core and a butyl rubber valve seat and sealing ring. The valve is always closed until the shielded valve core is detached from the valve, the valve seals instantly; the chuck itself is also self-sealing when detached from the valve.

Changing a Valve Core:
- Valve cores should always be securely tightened. Disconnect the chuck. Incubate the jar.

- Before changing a valve core:
   - Loosen the valve core and remove the valve cap provided. A replacement valve core can be fitted if necessary. Valve cores should always be securely tightened.

- Detach the valve core:
   - The valve core can be unscrewed from the body of the valve using the valve cap provided. A replacement valve core can be fitted if necessary. Valve cores should always be securely tightened.

- Insert the new valve core:
   - Plastic dust caps are provided to prevent dust particles entering the valve core and possibly interfering with a flawless operation of the spring mechanism.
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.

2. Cut open HiMedia’s Anaero Indicator Tablet Sachet (LE001B) and remove one tablet pack. Insert the pack into the smaller (upper) clip on the plate carrier immediately.

3. Lower the plate carrier into the Polycarbonate base.

4. Place the rail on the base making sure that the 0 ring is correctly placed (verify pressed against the flanges as a visual aid). Apply the banjo clamp. Screw down the clamped wheel until tight.

5. HiMedia chucks have to be used for the Evacuation Replacement Technique to enable a vacuum to be drawn. One chuck is fitted to the vacuum line and one to the gas supply by means of the clips provided. The ‘top’ valve has a metal rod below the lid. The main seating provided can be attached to the metal rod in such a manner that incoming gas enters at the bottom of the jar to improve mixing of the hydrogen with the residual oxygen.

6. Fill the chuck connected to the vacuum line to the valve marked “Vacuum” as follows:
   - Open the side arm on the chuck body and PPMS (not scored) the open end of the chuck firmly down on to the valve seating. Screw will damage the reusable rubber washer and cause the chuck to leak. While maintaining 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.
   - Evacuate the system to about -0.6 bar pressure. The metal rod below the lid must not be further tightened if it appears loose.
   - 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.
   - Release more gas mixture to the jar until the gauge reads zero. Disconnect the chuck. Incubate the jar. The valve core can be unscrewed from the body of the valve using the valve cap provided. A replacement valve core can be fitted if necessary. Valve cores should always be securely tightened.

7. Observe pressure changes in the jar.

8. 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 leaking jar will be detected at this stage because the vacuum reading will not remain constant.

9. 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.

10. Observe pressure changes in the jar.

11. Release more gas mixture to the jar until the gauge reads zero. Disconnect the chuck. Incubate the jar.

12. 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 tablets to purple.

13. After incubation the Indicator tablet should be discarded with the normal laboratory litter.

14. The interior of the lid and jar should be kept free of dust.

Precautions:
- Do not connect directly to high pressure gas cylinders. Always use an intermediate pressure system e.g. a reducing valve or rubber bladder.
- Always use an intermediate pressure system, e.g. a reducing valve or rubber bladder. H and CO gas mixture is flammable and appropriate precautions should be taken. Keep away from all naked flames and sparking electrical equipment.

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.

2. Cut open HiMedia’s Anaero Indicator Tablet Sachet (LE001B) and remove one tablet pack. Insert the pack into the smaller (upper) clip on the plate carrier immediately.

3. Lower the plate carrier into the Polycarbonate base.

4. Place the rail on the base making sure that the 0 ring is correctly placed (verify pressed against the flanges as a visual aid). Apply the banjo clamp. Screw down the clamped wheel until tight.

5. HiMedia chucks have to be used for the Evacuation Replacement Technique to enable a vacuum to be drawn. One chuck is fitted to the vacuum line and one to the gas supply by means of the clips provided. The ‘top’ valve has a metal rod below the lid. The main seating provided can be attached to the metal rod in such a manner that incoming gas enters at the bottom of the jar to improve mixing of the hydrogen with the residual oxygen.

6. Fill the chuck connected to the vacuum line to the valve marked “Vacuum” as follows:
   - Open the side arm on the chuck body and PPMS (not scored) the open end of the chuck firmly down on to the valve seating. Screw will damage the reusable rubber washer and cause the chuck to leak. While maintaining 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.
   - Evacuate the system to about -0.6 bar pressure. The metal rod below the lid must not be further tightened if it appears loose.
   - 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.
   - Release more gas mixture to the jar until the gauge reads zero. Disconnect the chuck. Incubate the jar. The valve core can be unscrewed from the body of the valve using the valve cap provided. A replacement valve core can be fitted if necessary. Valve cores should always be securely tightened.

7. Observe pressure changes in the jar.

8. 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 leaking jar will be detected at this stage because the vacuum reading will not remain constant.

9. 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.

10. Observe pressure changes in the jar.

11. Release more gas mixture to the jar until the gauge reads zero. Disconnect the chuck. Incubate the jar.

12. 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 tablets to purple.

13. After incubation the Indicator tablet should be discarded with the normal laboratory litter.

14. The interior of the lid and jar should be kept free of dust.