

Microaerobic, anaerobic workstation is a kind of professional experimental equipment integrating confined operation, atmosphere regulation, culture support and real-time monitoring.

Microaerobic and anaerobic workstations are mainly used for microorganism inoculation, cultivation, transfer, medium change and observation in an anaerobic or low oxygen environment. The workstation is designed to provide experimental conditions for bacteria that are sensitive to oxygen or require a specific atmosphere for growth, and is an important tool for microbiology laboratories.

### Features

1. Wide applicability: can simultaneously meet the national standard requirements of a variety of anaerobic and microaerobic bacterial culture needs, such as *Shigella* (anaerobic, 41.5°C), *Campylobacter jejuni* (microaerobic, 25°C), *Clostridium perfringens* (anaerobic, 36°C), *Clostridium botulinum* (anaerobic, 35°C) and lactobacilli (anaerobic, 36°C) and so on.
2. Strong sealing: the use of rigid cuffs with a long sleeve, to ensure that the operation process of the outside air can not enter, the experimental staff can be completely isolated from the state of oxygen operation.



3. Complete module configuration: equipped with Petri dish racks, UV lamps, fluorescent lamps, power sockets, catalysts and decontamination and a series of components, power-on ready to use.
4. Real-time monitoring system: built-in oxygen analyzer to realize continuous monitoring and safety control of oxygen concentration in the operation chamber.
5. High operation convenience: equipped with wireless foot switch, supporting foot-controlled gas switching or vacuum extraction operation, improving the efficiency of use.

### **Core Advantages**

1. Accurate environmental control: through vacuum pump pumping, hydrogen and nitrogen mixed filling and catalytic deoxidation, it realizes oxygen concentration  $\leq 0.1\%$  and provides stable and reliable anaerobic/microaerobic environment.
2. High degree of equipment integration: the whole machine integrates a variety of necessary components, no need for additional purchase, cost savings.
3. Strong temperature adaptability: can be adapted to the conventional laboratory temperature (25°C) and high-temperature culture requirements, applicable to different strains of bacteria.
4. Easy maintenance: supporting the provision of replaceable O-ring, catalyst, lubrication powder and other consumables to extend the service life.
5. Safe and efficient: UV germicidal lamp and independent built-in socket to enhance the safety and electrical convenience, support long time continuous use.

## Working Principle

1. Gas replacement mechanism: through the vacuum pump first pump out the air in the operating chamber, and then filled with a mixture of nitrogen, hydrogen and carbon dioxide to replace oxygen.
2. Chemical deoxygenation reaction: The catalyst bag contains highly efficient palladium catalyst, which makes hydrogen react with residual oxygen at room temperature to generate water vapor, thus further removing oxygen molecules.
3. Sealing and Airtightness Maintenance: Designed with high-strength gloves and O-ring seals, the purity and stability of the internal atmosphere will not be damaged during any operation.

In addition, the oxygen analyzer monitors the oxygen concentration changes in the environment in real time, and prompts the user through the feedback mechanism whether the gas needs to be replaced again to ensure that the quality of the environment meets the requirements.

## Working Conditions

- Power requirements: 220V AC, 50/60Hz
- Rated current: 4A
- Use environment: room temperature 25°C, relative humidity <90%, suitable for routine laboratory environment

## Standard Configuration List

- Host: 1 set.
- Vacuum pump: 1 set.
- Oxygen analyzer: 1 set.
- Long cuff: 1 pair.
- Rigid cuff: 1 pair.
- O-rings (for wrist): 2 pairs.
- O-rings (for long cuffs): 1 pair.
- Wireless foot switch: 1 pc.
- Petri dish rack: 8 pcs.
- Fluorescent lamp: 1 pc.
- Ultraviolet lamp: 1 pc.
- Catalyst (200g): 3 bags.
- Deoxidizer (Regulator, 200g): 3 bags.
- Lubricating powder: 1 bottle.

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- Internal power sockets: 2 pcs.
- Power cord: 1 pc.
- Operation manual and installation accessories: 1 set.