anaerobic hypoxic workstation with only one working window

Anaerobic hypoxic workstation is a kind of experimental equipment designed for microbial research and cell culture, capable of simulating anaerobic and hypoxic conditions in a highly controlled environment, which is widely used in experiments in the fields of bacteriology and cytology.

Anaerobic Hypoxia Workstation

The Anaerobic Hypoxia Workstation provides a growth environment for microorganisms, anaerobes, microaerobes, and cells by independently controlling oxygen and carbon dioxide concentrations and humidity.

Features

1. **Precise Oxygen Control:** Adjustable oxygen concentration simulates the human body's low oxygen environment, suitable for microaerobe and anaerobe cultivation.
2. **CO_2 Concentration Control:** Precise regulation optimizes cell culture environment and improves results.
3. **Automatic Humidity Regulation:** Intelligent humidity control system maintains optimal humidity, avoiding dry or overly wet conditions.

4. **High-Efficiency Filtration:** Built-in HEPA U16 filter removes fine particles, ensures clean air and prevents external contamination.
5. **Long Sleeve Operating System:** User-friendly design facilitates easy operation and effectively prevents contamination.
6. **Flexible Air Intake Timing:** Set air intake time and frequency to adapt to different experimental needs.
7. **Single Working Window:** Reduces outside air interference, ensures experimental environment stability.

Advantages

1. **Precise Environmental Control:** Simultaneous control of oxygen, CO_2, and humidity for stable experiments.
2. **High-Efficiency Filtration:** HEPA system and closed design prevent external pollution of cultures.
3. **Versatile Experimental Adaptability:** Suitable for anaerobic/microaerobic bacteria and cell experiments including hypoxia and oxygen fluctuation.
4. **Easy, Safe Operation:** Built-in long sleeve system improves convenience and safety.

Working Principle

The workstation simulates in vivo microenvironments by real-time monitoring and adjustment of internal gases. Oxygen and CO_2 sensors continuously collect data; an automatic control system regulates gas concentrations to maintain preset conditions. Ultrasonic humidification stabilizes humidity. HEPA U16 filter removes airborne contaminants.

Areas of Application

1. Microbiology research: Culturing anaerobic and microaerobic bacteria, oxygen-sensitive species.
2. Cell culture: Stable low oxygen/CO_2 environment for cancer cells, stem cells, etc.
3. Biomedical research: Cell experiments under hypoxia and oxygen fluctuation for studying cell behaviors.
4. Environmental simulation: Mimicking low oxygen/hypoxia for physiological and pathology studies.
5. Drug research: Simulating low oxygen for drug screening and pharmacology.
6. Food & environmental testing: Microbial and environmental sample culturing for monitoring and analysis.

Main Configuration

- Host: 1 unit
- 4 sets fully sealed sleeve inlet/outlet system
- HEPA U16 filter: 1 set
- Oxygen sensor: 1 set
- CO_2 sensor: 1 set
- Multi-way gas mixer: 1 set
- Gradient circulation control system: 1 set
- Ultrasonic humidification system: 1 set
- 16 Petri dish racks
- Fluorescent lamp: 1 pc
- UV lamp: 1 pc
- Catalyst (200g): 5 bags
- Regulator (200g): 5 bags

- Lubricating powder: 1 bottle
- Internal power sockets: 4 pcs
- Power cord: 1 pc
- Operation manual: 1 set
- Installation & commissioning accessories: 1 set