

**Microbial Air Sampler**  
**FKC-1**  
**User Manual**

**A & E LAB (UK) CO.,LTD.**

## **1. Working Principle introduction**

The FKC-1 microbial air dust sampler is a highly efficient porous inhalation dust sampler. It is designed according to the theory of constant velocity sampling. The sampling is direct, and the wind speed at the head is basically the same as that in the clean room, which can more accurately reflect the microbial concentration in the clean room. During sampling, the dust-carrying air passes through the micropores at a high speed and is evenly impacted on the surface of the agar in the culture dish; these living microorganisms obtain nutrient uniformity and sufficient on the surface of the agar, and during the cultivation process, the dynamic rehydration process occurs rapidly, and the high-speed growth occurs resulting in faster conclusion.

## **2. Using Environment**

1. Temperature: 10--35°C
2. Relative humidity: 10--90 % RH
3. Atmospheric pressure: 80—110kPa
4. Maximum dust concentration : 100000000 particles/  
m<sup>3</sup>@0.5µm or 0.2mg/m<sup>3</sup>

## **3. Main Characteristics and Parameters**

1. The sampling head is a myriad of micropores, which distribute the microorganisms evenly on the surface of the agar, reducing the overlap of dust and bacteria and reducing the microbial counting error.
2. Sampling flow rate: 100L/min。
3. Sampling head flow rate: 0.38m/s It is basically the same as the clean room air velocity (sequential sampling).
4. The sampling amount can be arbitrarily set from 0.001 to 9.999 m<sup>3</sup>.

5. Use standard universal Petri dish  $\Phi 90*15$
6. Power supply: DC16.8V, can work continuously for 7h after charging.
7. Dimensions:  $\Phi 120*325$
8. Weight: 3.0kg

#### **4. Structural Characteristics**

1. The sampler consists of two parts: the upper part is the sampling head, the culture dish holder, the sampling pump, the sampling pump base, and the sampling pump power supply. The lower part is the control board, memory, LCD display, keyboard, and battery pack.

2. The sampler can be used for both AC and DC. There is a power jack and data line interface on the lower part of the instrument. When the DC is used, the switch is powered by the battery. When the AC is used, the randomly configured 16.8V power adapter is inserted into the jack. When it is not turned on, it is in the charging state. When the switch is turned on, it is powered by the 16.8V power adapter and maintains the charging state.

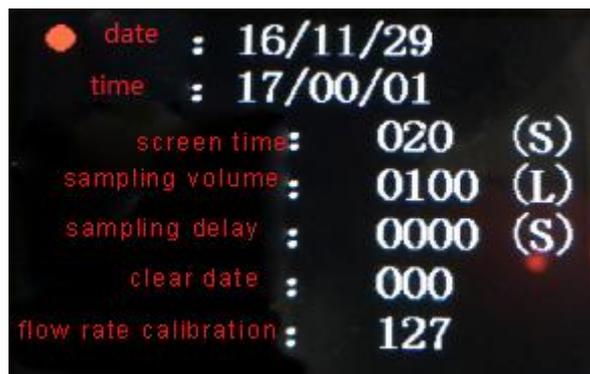
#### **5. Operating Instructions**

1. Disinfect the sampling port, culture dish and cover with disinfectant or UV disinfection.
2. Press the function set by the host panel, see the below figure



1. The main interface is displayed after booting, "14/09/24" indicates the date, "15:03:26" indicates the time, and "L:0001" indicates the sampling number. "Standby" means that the status is ready to start. "0000L" means real-time sampling volume.
2. Data query: Please press the "Stop" when the machine is in stand by state. When "Standby" change to "Query", then you can press the "↑" and "↓" to query the historical data. If you are in the "pause" state, you need to press the "Stop" button twice to enter the data query state.
3. Sampling: When in the "standby" state, press the "sampling" button to enter the sampling state directly. When you are in the "query" state, press the "Stop" button to enter the "standby" state before sampling.

4. Pause: When the machine is sampling, press and hold the “Stop” button for 2 seconds, the instrument enters the pause state, and the status is displayed as “Pause”. If you continue to sample, press the “Sampling” button to continue sampling. If resampling, press the “Stop” button again in the “Pause” state to enter the “Standby” state, and press “Sampling” to resample.
5. In the main interface state, press "Function" to enter the setting interface.。



In the state of setting the interface, press the “Function” button again to set the parameters, press the “ ↓ ” button to adjust the position of the cursor, and press the “ ↑ ” button to adjust the value. Press "Function" to save, press "Exit" returns to the main interface for work.

1. “clear data:000” means delete data. Adjust to “555” and press “Function” to delete all historical data.
2. “Flow rate calibration:000” indicates the parameter for adjusting the fan speed ( Factory setting, only for calibration,

customers can not change)

## 6. Precaution:

1. If the instrument fails, contact the company in time, do not disassemble it yourself.。
2. When moving the main unit, first unplug the power cord and ask for careful and smooth movement. Do not invert it to avoid damage to the instrument.

## 7. Packing List

NO.	ITEM NAME	MODEL	UNIT	QTY	REMARKS
1	AIR SAMPLER	FKC-1	SET	1	
2					
3	Charger	DC16.8V	PC	1	
4	User Manual		PC	1	
5	Quality Certificate		PC	1	
6	Calibration certificate		PC	1	
7	Petri dish	Φ90×12	PCS	2	



A & E LAB UK CO.,LTD

E-MAIL: SALES@UKAELAB.COM

WEBSITE: WWW.UKAELAB.COM