Portable Microbial Air Sampler User Manual

（Please read the instruction manual carefully before use.）

Catalog

1. Description

This instrument is a high-performance, portable, lithium battery powered sampler based on the Andersen impact method principle. The air suction flow rate is 100L per minute, and the impact velocity is less than 12m/s, equivalent to the fifth level of Anderson impact rating. Ensure that particles larger than 1um are collected, which can be widely used for monitoring air microorganisms in environments such as disease prevention, health supervision, biological cleanliness, and pharmaceutical industry, as well as for sampling and studying air microorganisms in relevant research and teaching departments. This provides a basis for evaluating the risk of microbial pollution in the air environment and its prevention and control measures.

The instrument can store 500 sampling records and has a built-in printer for easy printing of sampling records at any time. It can be connected to a computer through an external USB interface of the instrument to export historical records.

2.Technical Parameter

2.1 Features

(1) Sampling volume 1-9999L;

(2) Touch screen;

(3) Automatic printing upon completion of sampling;

(4) Storage of sampling records with more than 500 entries;

(5) Lithium battery power supply;

(6) Integrated design;

(7) Time and date display;

(8) USB Communication Interface;

(9) Use standard universal culture dishes Φ90*15mm;

(10) Sound prompt;

(11) According to international guidelines: equal force measurement, approximately 0.35m/s, 100L/min.

2.2 Physical Parameters

(1) Weight: 1.6kg

(2) Size: 215×140×245mm

(3) Power Consumption: 8W（Sampling power consumption）

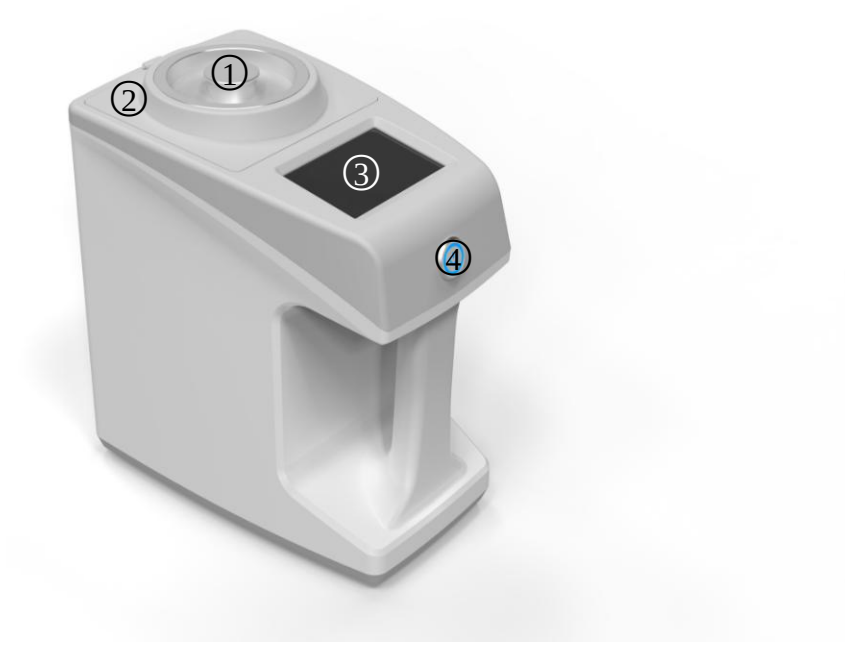
2.3 Work Environment

(1) Temperature: 10-35℃

(2) Humidity: 10-85%（No frost）

(3) Working voltage: 12V

3.Instrument Structure



① Dust Cover
② Sampling Head
③ Display Screen
④ Power Swich
⑤ Outlet Vent
⑥ Printer
⑦ USB Interface
⑧ Charging Port

4. Instructions

4.1 Preparation before Sampling

1.The temperature and humidity of the tested clean room must meet the specified requirements; The static pressure difference, air exchange rate, and air flow rate must be controlled within the specified values.。

2.The unidirectional flow test should be conducted after the purification air conditioning system has been running normally for no less than 10 minutes; Non unidirectional flow shall begin no less than 30 minutes later.

3.During static testing, there should be no more than 2 indoor personnel. During sampling, the testing personnel should be on the downwind side of the sampling port.

4.Testers should follow sterile operating procedures. Take all measures to prevent contamination of the sampling port and other human contamination of the sample.

5.Testers must wear clean clothing that meets the cleanliness level.

6.Before testing for planktonic bacteria, the clean room and sampler being tested should have been disinfected.

4.2 Sample Operations

1.Remove the sampling head, place the 90mm culture dish on the support bracket, and install the sampling head.

2.Click the start button on the homepage of the screen to enter the sampling interface, and click start sampling to start the instrument operation.

3.After the sampling is completed, the buzzer will beep to indicate.

4.3 Instrument Operation

After turning on the instrument power, the instrument enters the main interface and displays information such as date, time, and battery level.

4.3.1 Start

Click the "Start" button to enter the sampling interface, which displays the current sampling number and sampling amount.

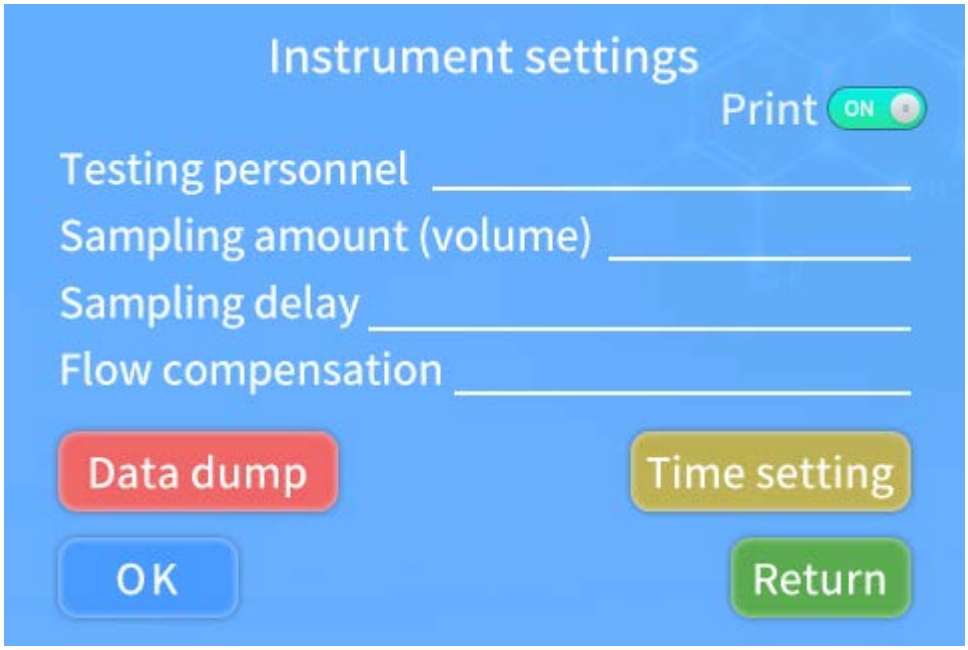
Click 'Start Sampling' to start the instrument and start sampling. The sampling amount will accumulate from zero.

Click 'End Sampling' to reset this sampling.

Click 'Return to Home' to return to the main interface.

4.3.2 Set

Click the "Settings" button on the main interface to enter the system settings interface, where you can set information such as system date and time, sampling volume, etc.



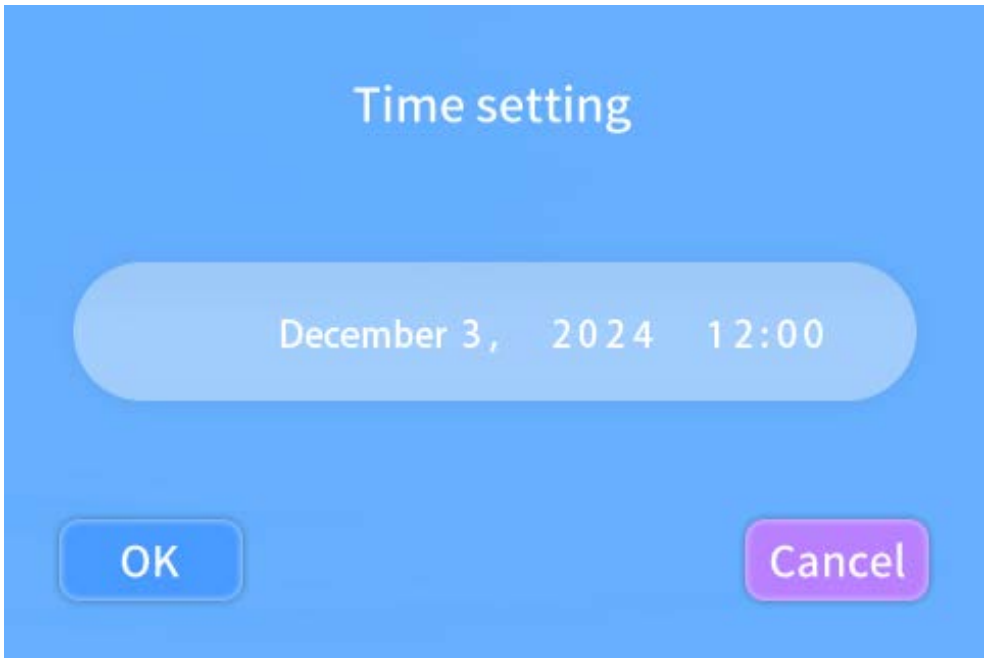
Clicking on the display position of the detection personnel, sampling volume, sampling delay, and traffic compensation content in the interface will pop up an editing window to edit the corresponding content. The sampling range is 1-9999, and the sampling delay unit is

seconds, which is the cumulative sampling volume delay. The flow compensation can be negative, which is the compensation of the actual flow relative to 100L.

Click 'Data Clear' to clear all sampling records. If the records are not cleared, they will be automatically saved from scratch and overwrite the original records when the storage is full.

Click the 'OFF' icon to turn on the automatic printing function. After each sampling is completed, the list will be automatically printed. Click again to turn off this function.

Click the "Time Settings" button to enter the world settings interface and set the current date and time.



4.3.3 Query

Click the "Query" button on the main interface to enter the query interface, which displays the serial number, sampling time, and sampling amount information.

Click "flip up" or "flip down" to view the next and previous records, and click the "print" button to print the current display content.

5. Cleaning and Disinfection

The appearance and sampling head of the air sampler can be disinfected with commercial disinfectants or 70-90% alcohol solution (or isopropanol/water solution).

1.The surface of the instrument can be directly sprayed with disinfectant and wiped with a sterile towel, or sprayed onto a sterile towel and wiped again. Before using the air sampler, all disinfectants must be completely wiped dry.

2.The sampling head can be wiped with a medical degreased cotton soaked in disinfectant or alcohol, or directly sprayed with disinfectant onto the sampling head and wait for the disinfectant to evaporate before use.

3.The internal components of the air sampler can be disinfected using 70-90% alcohol solution or isopropanol/water solution in the ultra clean table. Wipe the outer surface with spray or wet towel. Allow the instrument to complete at least two 1000L sampling processes in the ultra clean bench. During each sampling process, use 70-90% alcohol solution or isopropanol/water solution above the instrument for two short spray to ensure that the sampling head is installed on the instrument at this time.

Use a sterile towel to dry the air sampler, then cover it with a sterile plastic bag to keep the instrument in a sterile state before the next use, or transfer the machine to a sterile area.

Attention: When the air sampler is not in use, it should be covered with a dust cover. The sampling head should not be bumped. If the small pores of the sampling head are blocked, use a fine needle to clean or use an ultrasonic bath for cleaning.

6.Configuration List

Serial Number	Name	Quantity	Unit
1	Instrument Main Unit	1	Unit
2	Power Adapter	1	Piece
3	90mm Culture Dish	2	Set
4	Thermal Printing Paper	1	Roll
5	User Manual	1	Copy
6	Certificate of Compliance	1	Piece