

Portable Bioaerosol Monitor ZR-7500



Features

- Real-time monitoring of the changing trends of aerosol particles, fluorescent particles, and biological particles in the air
- No consumables, unmanned
- Password-protected system
- 7-inch touch screen with a graphical display interface and multiple data statistical modes for easy subsequent analysis
- Customizable warning values, sound and visual alarms
- Appointment for start-up testing

Standards

- ISO 14698
- EN 17141:2020
- USP <1223>
- GMP

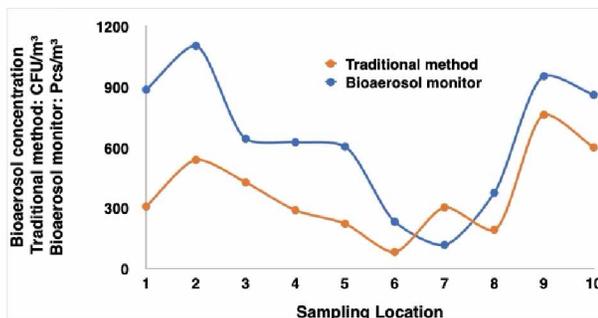
Introduction

The ZR-7500 portable bioaerosol monitor uses Mie scattering and ultraviolet-induced fluorescence (UV-LIF) methods to detect bioaerosol particle size, enabling real-time monitoring of the concentration of airborne biological agents (bacteria, spores, viruses, toxins, etc.). It is widely used for monitoring airborne biological agents in indoor environments, such as hospital cleanrooms, biopharmaceutical cleanrooms, public spaces, manually controlled indoor environments, public transportation environments, and indoor aquaculture environments.

Long time incubation VS. Real-time monitoring

Current air microbial monitoring relies on the traditional "sample collection- culture-analysis" method. This process takes one to seven days to produce test results, requiring significant human, material, and time resources.

Against increasingly stringent regulatory requirements, rising labor costs, and the increasing demand for intelligent automation, traditional monitoring methods are increasingly unable to meet demand, necessitating the urgent need for advanced alternative technologies.



Long time incubation	Real-time monitoring
<ul style="list-style-type: none"> • Sampled monitoring • Long cycle: >48 hours • Time delays • Increased cost & inefficiency • Reduced accuracy • Limited trending • Greater contamination risk • Greater risk of production loss 	<ul style="list-style-type: none"> ✓ Continuous monitoring ✓ Immediate ✓ Real time ✓ No consumables, unmanned ✓ Trend data & analysis ✓ Reduced risks

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Specifications

Parameters	Range
Size range	0.3-10 μ m
Size channels	0.3, 0.5, 1.0, 2.0, 3.0, 5.0, 10 μ m
Flowrate	2.83 L/min
Response time	<15 s
Data recording interval	1-9999 s
Self-purge	\leq 10 min
Zero point	\leq 1
Particle counting repeatability	\leq 5%
Total particle counting efficiency	(100 \pm 20) %
Biological particle false counting rate	\leq 0.3%
Biological particle counting efficiency	(100 \pm 50)%
Sampling time	1-9999mins
Interval	1-9999mins
Cycles	1-99times
Alarm	Instrument failure alarm, over-limit sound and light alarm
Standby mode	Screen off mode, lock mode
Operating conditions	Temperature: 0-55 $^{\circ}$ C, Relative humidity \leq 95%, non-condensing
Storage conditions	Temperature: -20-55 $^{\circ}$ C
Data storage	\geq 8G, 100000 group
Communication	USB, RS485, Bluetooth, Wi-Fi
Display	7-inch touch screen
Power supply	DC24V 2A
Built-in Battery	Working time \geq 4 h
Dimensions	(L203 \times W232 \times H213)mm
Weight	<5.0 kg
Power consumption	<50 W