EBT

BIOBATS

The Next Generation of

Biological Threat Detection

INTRODUCTION

## Airborne Biological Hazards:
A GROWING GLOBAL CONCERN

In today's interconnected world, the threat of pandemics and the rapid spread of emerging infectious diseases remain one of the gravest public health and safety challenges we face. Newly emerging viruses, bacteria, and other biological agents can be dispersed through the air, posing risks in densely populated areas, transportation hubs, healthcare facilities, and beyond. Rapid and accurate detection is critical for containing outbreaks before widespread transmission occurs.

EBT Co., Ltd. -
PIONEERING BIOAEROSOL MONITORING TECHNOLOGY

As a global leader in aerobiology and bioaerosol monitoring, EBT Co., Ltd. is committed to developing cutting-edge solutions that safeguard environments against airborne biological threats. Our BioBats offers unparalleled early warning and real-time detection capabilities, taking airborne pathogen identification to unprecedented levels of accuracy, sensitivity, and situational awareness.
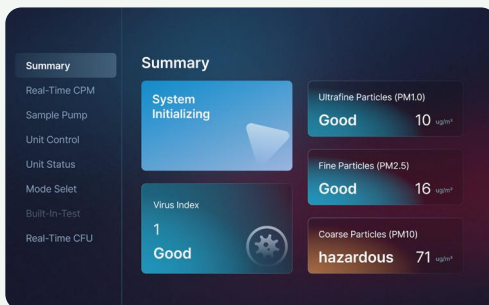
CORE INNOVATIONS

Breakthrough Technologies Driving Superior Bioaerosol Detection

BioBats embodies a major leap forward in bioaerosol detection, harnessing our proprietary innovations:

ADVANCED AERODYNAMIC CYCLONE

- Optimized cyclone geometry for improved size-selective separation (0.3-10μm)
- Enables concentration of biological particles for enhanced detection

SAMPLE PUMP COLLECTION

- Alarm automatically triggers the sample pump for bioaerosol collection
- Enables sample collection for PCR testing for further analysis

DUAL-MODE OPTICAL BIOSENSING

- Fluorescence measurement across 450-650nm emission range
- Light scattering detection precisely identifying PM1.0, PM2.5, and PM10
- Ultra-high sensitivity down to 100 ACPLA (Airborne Concentrated Particles per Liter of Air)

LAMINAR AIRFLOW TECHNOLOGY & AUTOMATED BIT

- Laminar airflow ensuring accurate counting by direct sensor hits
- Built-in-test for system diagnostics
- Decontamination of internal BioBats through built-in UVC LED

VIRUS INDEX ENVIRONMENTAL MONITORING

- Proprietary Virus Index quantifies ambient biological threat levels
- Calculated based on integrated PM, CO_2, TVOC, temperature, and humidity sensors

SIGNAL PROCESSING

- Deep learning neural networks for adaptive signal analysis
- Automated biological particle classification as Virus or Bacteria
- Robust algorithms minimize false positive rates

SYSTEM CAPABILITIES

UNMATCHED PERFORMANCE IN BIOAEROSOL MONITORING

- Rapid real-time detection of airborne viruses and bacteria in <60 seconds
- Simultaneous particulate matter monitoring for comprehensive air quality assessment
- Automated aerosol sample collection for confirmatory analysis
- Flexible data connectivity via Ethernet, etc.
- Seamless integration with cloud platforms for remote monitoring

DESIGNED FOR THE REAL WORLD

- 10.1" touchscreen display with intuitive user interface
- Ruggedized industrial design for indoor and outdoor operation
- Continuous autonomous monitoring or discrete sampling modes
- Tool-free access to replaceable filter cassettes
- Low maintenance requirements and exceptional reliability

Side View

Front View

Top & Bottom View

SPECIFICATIONS & CRITICAL APPLICATIONS

SPECIFICATIONS

Feature	Value
Dimensions	
Width x Height x Depth	339 mm x 510 mm x 250 mm
Weight	12.5 kg
Enclosure & Protection	Aluminum / Lockable
Sampling	
Air collection	>10L aerosol/min
Collecting particle size	0.3-10µm (microns)
Particle concentration ratio	>10 times
Fluorescence Method Analysis	
Threats	Virus, Bacteria
Classification	Yes
Sensitivity	100 ACPLA
Light Source	405nm CW Laser 80mW
Sensor	Semiconductor-based Optical Sensor 10^6 A/W sensitivity
Measurement wavelength	450-650nm emission
Analysis time	<60 secs

SPECIFICATIONS

Feature	Value
Light Scattering Method Analysis	
Detection	PM 1.0, PM 2.5, PM10
Range	0~6000µg/m3
Virus Index Analysis	
Sensor	PM, CO2, TVOC, Temperature, Humidity
System Interface	
Display	Full display 10.1-inch touch screen LCD, On-board LED status indicators
Alerts	Audible buzzer, visual display notifications
Password	Yes
Power	
Power	110/220 VAC, EU/UK easy-detach plug compatible, 24/7/365 operation
BIT	Yes
Decontamination	Internal disinfection UVC LED
Remote Control	Tablet, C2

VIGILANCE ACROSS KEY SECTORS

- Healthcare & Biodefense
- Homeland security monitoring
- Public Spaces & Transportation
- Mass transit hubs (airports, rail stations, terminal etc.)
- Outbreak tracing and surveillance

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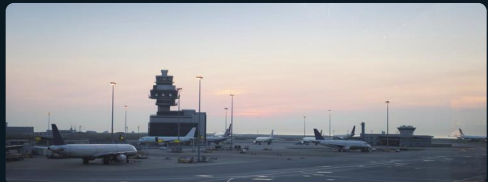
Protect what matters the most with BioBats

BioBats empowers you to take proactive measures against airborne biological threats, promoting a safer and healthier environment for all.

Contact EBT Co., Ltd. today to safeguard your spaces!

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