

# BANS

BioAerosol Monitoring System

#### Monitoring Airborne Microbes in Real Time

- Continuous Monitoring
- Immediate Data
- Lower Cost

#### MICRONVIEW

CONTINUOUS

Real-time, continuous airborne microbial monitor

IMMEDIATE

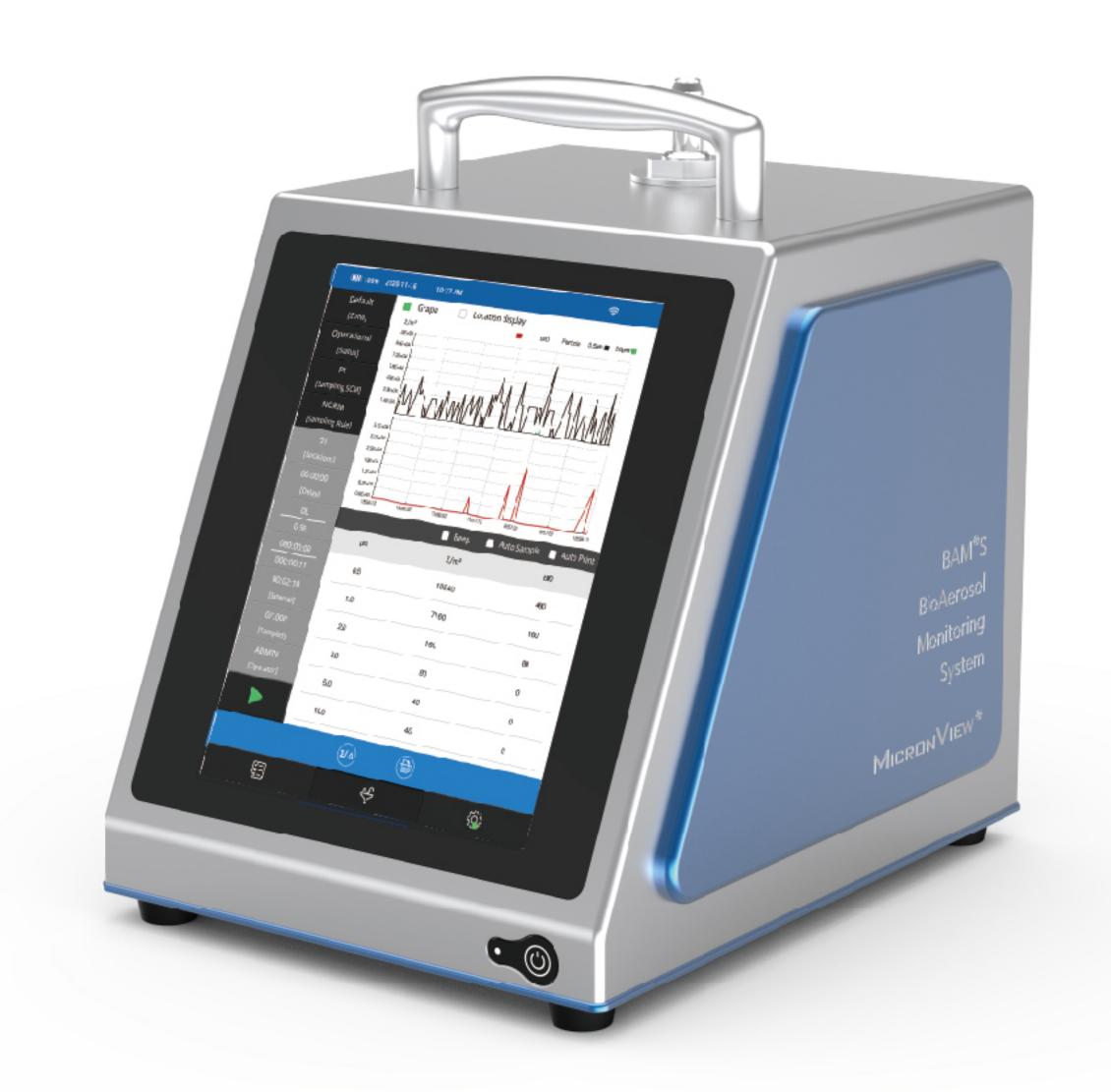
Certified ISO particle detector

NO CONSUMABLES

Most efficient, user-oriented design

MOST EFFECTIVE

First truly portable microbial monitor



#### BAMS Uses



#### **ALERTS**

Provides real-time continuous data to help with the root cause identification of contamination. Alerts In time to reduce the risk of product loss.



#### PROCESS & TRAINING

BAMS real-time results are a perfect training aid to drive immediate technique correction and process improvement.



#### TRENDS

Given delays and time lapses inherent to compendial testing methods, trend analysis is all but prohibited. BAMS changes that.



#### **ROOT CAUSE**

A uniquely effective diagnostic tool, BAMS can instantaneously help detect excursions and help identify the root cause.



#### STERILITY TEST ISOLATORS

BAMS enables enhanced coordination and control of sterility test isolators.



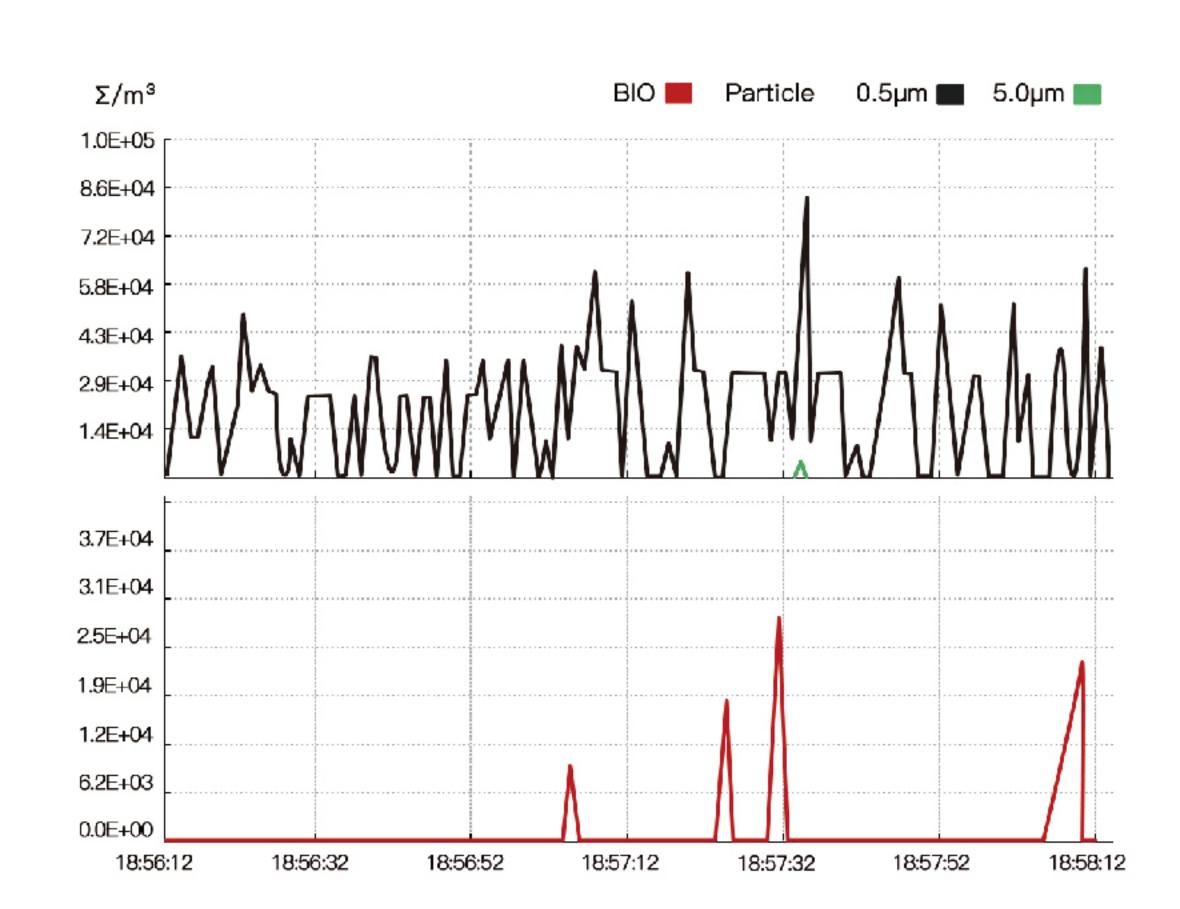
#### FILL LINE QUALITY

BAMS real-time continuous monitoring helps to ensure the cleanliness of this crucial quality environment.

#### Wait Time vs. Real Time

Current airborne microbial monitoring uses interval, ad-hoc and event-driven sample collections, which require incubation. This process takes 1-7 days to generate test results, delaying and, at best, inhibiting, contamination root cause identification. This also does little, if anything, to prevent major production scrappage.

The current monitoring process also requires managing complex collection and manual growth examination schedules for thousands, even tens of thousands, of air samples per month. This is expensive, requiring significant labor and material costs.



Real Time ,Real Data

Testing Aspect	Compendial Method	BAMS Benefits
Time to Results	<ul> <li>1-7 days</li> <li>More scheduled/unscheduled breaks</li> <li>Unlikely contamination identification</li> <li>Increased cost and inefficiency risks</li> </ul>	<ul><li>Immediate</li><li>Likely contamination identification</li></ul>
Detection Frequency	<ul> <li>Sampled monitoring</li> <li>Reduced accuracy</li> <li>Limited trending</li> <li>Greater contamination risk</li> <li>Greater risk of production loss</li> </ul>	<ul> <li>Continuous monitoring</li> <li>rend data and improved analysis</li> <li>Reduced contamination and production loss risks</li> </ul>
Coordination	<ul><li>Resource intensive</li><li>Higher labor costs</li><li>Time delays</li></ul>	<ul> <li>Minimal costs and resources</li> <li>Immediate and online</li> </ul>

# INCREASED CONTROL THE LATEST TECHNOLOGY

BAMS was designed to meet exacting, pharmaceutical manufacturing standards while providing real-time data for immediate action and catastrophic loss avoidance. It was also designed for end-users. Small. Light. Easy to use.

#### OPTICAL SENSOR TECHNOLOGY

BAMS' principle of operation is the simultaneous measurement of an individual particle's size and its ultraviolet (UV)-induced intrinsic fluorescence signal:

- Particle sizing is possible through the widely utilized principle of Mie Scattering.
- Simultaneously, the instrument detects the presence or absence of the intrinsic fluorescence of certain metabolites that indicate biologic activity.

### Specification Sheet

Specification	BioAerosol Monitoring System   BAMS	Specification	BioAerosol Monitoring System   BAMS
Size range	0.5μm to 25μm	Export file	PDF file or EXCEL file
Size channels	0.5μm, 1.0μm, 2.0μm, 3.0μm, 5.0μm, 10.0μm	Data storage	119G
Laser source	aser source Long life laser		Authority management, authority level divide
Size resolution	<15% @ 0.5µm (meets ISO 21501-4)		into admin, operator and supervisor
Count efficiency	50%±20% for 0.5μm, 100%±10% for >0.75μm (meets ISO 21501-4 and JIS B9921 )	Data reliability	Compliant with 21CFR Part11
		Print	Auto, off-line
Flow rate	5L/min with±3%	Dimensions (HxWxD)	10 (H) x 7.87 (W) x 10.39 (D) in 255 (H) x 200 (W) x 264 (D) mm (with handle and foot mat)
Flow rate control	Electronic, automatic closed-loop		
Sampling time	0.1 seconds-999 hours 59 minutes 59 seconds	Weight	12.8lbs/5.8Kg (without battery)
Delay	0-99 hours 59 minutes 59 seconds	Enclosure	316L Stainless Steel and anodized aluminum
Cycles	1000 samples on one location	Power	AC 100-240V, 50 Hz/60 Hz
Interval	0-99 hours 59 minutes 59 seconds	Battery	10.8V, 9000mAh, rechargeable lithium battery
Sampling mode	Manual, auto, cumulative count $\Sigma$ / differential count $\Delta$ or concentration	Operating conditions	Temperature: 5°C-35° C/41°F-95°F Relative humidity: 5-90% noncondensing
Zero count	<1count/5min	Storago	Temperature: 5°C-35° C/41°F-95°F Relative humidity: 5-90% noncondensing
Concentration limit	4,000,000 particles/ft³at 10% coincidence loss	Storage conditions	
Exhaust	Internal HEPA filter (>99.997%@0.3µm)	Calibration	Once a year
Display	8.0" touch screen	frequency	
Language	Chinese, English	Warranty	1 year after activation
Communication	RJ45, USB, SENSER-HUB, WIFI	RJ45, USB, SENSER-HUB, WIFI Safety	
Alarm	Audible built-in alarm		EN 61326-1:2013, EN 61326-2-2:2013, EN 61000-6-1:2007 EN 61000-6-3:2007+A1, EN 300328 V2.1.1: 2016, ETSI EN 301489-1 V2.2.0: 2017, ETSI EN 301 48917 V3.2.0: 2017, EN 62311:2008 EN 62479: 2010, EN 60825-1: 2014 ASTMD 4169 DC13,FCC IDENTIFIER: 2AV6V-M110
Capture the biological contamination sample	Connect the BioAerosol Sampler(BAS) via WIFI/USB to collect the biological contamination sample in real time		
Reports	ISO/EUGMP/CHINESEGMP		

## Ordering Information

Name	Model	Order No.
BioAerosol Monitoring System   BAMS	M110	MACHM110

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