

IBAC™

REAL TIME BIOLOGICAL AEROSOL THREAT MONITOR

The IBAC™ is a real-time continuously operating indoor or outdoor monitor that provides early warning of biological aerosol threats. The IBAC facilitates the process of identifying bio-terror agents to allow timely containment, treatment and remediation. Monitors are designed to detect concentrated levels of biological aerosols. Possible agents released in a bio-threat attack can include bacterial spores (such as *B. anthracis*, which causes anthrax), bacteria (such as *Y. pestis*, which causes plague), viruses (such as smallpox) or toxins (such as ricin).

IBAC monitors can operate independently or as part of a network configuration to form the “first tier” of an airborne biological threat monitoring system. Communication and response can be managed through existing building control systems or an independent network.

In addition to providing real time alerts to biological aerosol threats, the IBAC can trigger a secondary aerosol sample for subsequent analysis and identification. The C100™ modular tactical collector is designed for field collection of bioaerosols. The collector is based on proprietary rotating impactor technology and yields a 6 ml aqueous sample for field and laboratory analysis.

Integrated with the IBAC or deployed stand-alone, the C100 is optimized for enhanced collection of small particles, such as single spores, and can collect a triggered or continuous aerosol sample. The rugged design and high sensitivity allow the system to be deployed in severe environments such as HVAC systems and outdoor settings.



FEATURES

- Provides near real time warning capability for biological aerosol threats
- Government validated with over 1.3 million hours of run time in relevant environments
- Alert can automatically trigger a particulate sampler for subsequent identification
- Unattended 24/7 operation without consumables
- Complete self-diagnostic system
- Battery or line powered with up to 16 hours run time per battery charge
- Easily integrated with most facility monitoring and control systems
- Alert algorithms validated for both indoor and outdoor environments

IBAC SPECIFICATIONS

Power Consumption	14 watts
Input Voltage	100 to 240 VAC, 18 to 36 VDC
Case Dimensions	12 in x 8 in x 11 in (30 cm x 20 cm x 28 cm)
Weight	8.5 lbs (3.9 kg)
Communication	Ethernet, RS-232
Air Flow Rate	3.8 liters/minute
Operating Temperature	-5 to +125°F (-20 to +50 °C)
Storage Temperature	-40 to +160°F (-40 to +70 °C)
Operating Time	24 hours/day, continuously
Outputs	Particle data, bio-alarm, fault
Data Storage	Expandable internal MicroSD memory card
Aerosol Sizing	0.7 microns and larger
Maximum Aerosol Count Rate	25,000 particles/sec (500,000 particles/liter)
Measurement Frequency	Configurable down to 1/sec
Response Time	30 to 60 seconds
Enclosure	Aluminum, IP 66, weatherproof
Mounting	Mounts on vertical surfaces, horizontal surfaces or within secondary enclosure
Triggered Collection	Compatible with C100, BioXC™ and other triggered samplers

C100 SPECIFICATIONS

Dimensions	5.5" Dia x 6" H 10.5"H x 5.5"W x 8"D (on base module)
Weight	2.5 lbs
Nominal Flow Rate	150 lpm
Particle Size Collection	1 to 10 microns
Collection Media	Buffered rinse fluid provided in pre-measured vials
Sample Size	6 ml
Sample recovery method	Semi-automated rinse (performed after collection)



Detect-to-Warn Sensor Architecture

- Near real time warning capability
- Allows early prophylactic treatment
- Minimizes building contamination via triggered HVAC measures

