

TacBio

TACTICAL BIO-AEROSOL DETECTOR



Feature Highlights

- **Customer adjustable alarm threshold settings to minimize false alarm rate**
- **Low cost of ownership, no Consumables**
- **Light weight, weighs 8.8lbs**
- **Low power, >24 hr on battery**
- **Wireless or RS-232 communications capability**

TacBio was developed by the U.S. government for military, homeland security, and public health applications. It is a compact and rugged portable biological particle detector that uses both diffractive scattering and natural biological fluorescence to monitor aerosol particulates and classify them as being of either biological or non-biological origin.

Through incorporation of a multi-level algorithm-driven analysis as well as customer adjustable thresholds for various environmental conditions, TacBio exhibits a very low false positive rate without compromising excellent sensitivity. As a result, it has performed extremely well in recent competitive trials.

TacBio is very useful for tracking background levels of airborne biological materials and providing an alarm.

TacBio can also trigger a bio-aerosol collector such as the SASS-3100 Dry Particle Collector to collect a sample for confirmatory ID using a PCR bio-identifier such as Bio-Seq PLUS or an immunoassay technology such as NIDS.

Operation may be monitored remotely using Windows-based software provided with the unit. This control software also allows the TacBio bio-detection parameters such as alarm threshold setting to be optimized for specific environmental conditions to minimize false alarm rates. Signals may be transmitted between the TacBio and a monitoring PC or other equipment using either/or BioLink™ Bluetooth transmitters and receivers, or via RS-232 cables.

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TacBio

Smiths Detection is a global distributor of TacBio, manufactured by Research International (RI). RI is an official licensee of the U.S. government for the TacBio and has the right to manufacture and sell the instrument worldwide. RI is an innovative provider of leading edge Bio-Detection and Bio-Collection technologies.

Technical Data

General Specifications

Operating principle	Aerosol particle counter with UV fluorescence signature detection
Size	14.5 x 17 x 30.5 cm (5.7 x 6.7 x 12 in) without inlet air stack; 14.5 x 17 x 39.4 cm (5.7 x 6.7 x 15.5 in) with inlet stack attached.
Weight	4 kg (8.8 lbs) with battery
Threat detection	Aerosolized bacteria, spores, viruses, toxins. IP-67 rated and sealed for decontamination by immersion
Particle size range	Respirable particle range
Interferents	Interferent resistant to diesel smoke, pollen, silica dust
Detection limit	Dependent on target aerosol. 100 to 300 ACPLA typical
Start-up time	1 minute
Time to alarm	Less than 1 minute. A 30 minute historical baseline is used for alarm protocols
Sampling volume	1 liter per min of ambient air nominal
Communication	RS-232 or wireless BioLink Bluetooth. Also compatible with RS232-USB and RS232-RS422/485 adapters
Data storage	Collected data is stored on a removable SD-type data card. A 1.0 GB card will store more than 5 years of aerosol data
Alarms	Electronic digital alarm; Red LED and >100dB piezoacoustic alarm on unit (piezo alarm may be optionally de-activated by user)
Power	6.5 watts at 13.7 VDC. Can be used with BA-5590 primary battery; BA-5390 extended life battery; or UBI 2590 rechargeable battery. Operable on AC mains power or vehicle power with proper converter
Continuous operating time	Essentially unlimited if powered externally, or 30 hours on BA-5590 primary battery
Pump life	30,000 - 40,000 operating hours
Operating temperature range	-20°C to 60°C
Humidity	0 to 97% non-condensing
Consumables	None
Package:	EMI-resistant aluminum shell

For product information, sales, or service, please go to www.smithsdetection.com/locations

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