



# TacBio™

## Biological Aerosol Detector

Low Cost, Light Weight Aerosol Detection



*TacBio: Tactical biological detector*

**THE 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.

TacBio is extremely useful for tracking background levels of airborne non-biological and biological materials and providing an alarm and/or digital activation command to other equipment if there is a rapid increase in the aerosol background. It cannot identify the type of biological material detected, and for that reason it is correctly characterized as an aerosol “trigger.”

Operation may be monitored remotely using Windows-based software provided with the unit, and changes made to its operating characteristics as needed or desired. Signals may be transmitted wirelessly between the TacBio and a monitoring PC or other equipment using BioLink™ Bluetooth transmitters and receivers, or via RS-232 cables.

### FEATURES

- Economical
- Light weight
- True “biological trigger” device
- No consumables
- Wireless communications capable

### APPLICATION AREAS

- Military
- Homeland security
- Public Health

Research International Inc. is an official licensee of the U.S. government for the TacBio, and has the right to manufacture and sell the instrument worldwide.

For more detailed technical information, visit [www.resrchintl.com](http://www.resrchintl.com).

## TacBio Specifications

Characteristic	Description
<b>Operating principle</b>	Aerosol particle counter with UV fluorescence signature detection
<b>Particle size range</b>	Respirable particle range
<b>Threat identification</b>	Aerosolized bacteria, spores, viruses, toxins.
<b>Interferents</b>	Interferent resistant to diesel smoke, pollen, silica dust.
<b>Detection limit</b>	100-300 ACPLA in natural environments, 20-30 ACPLA under laboratory test conditions.
<b>Start-up time</b>	1 minute.
<b>Time to alarm</b>	1 minute or less. A 30 minute historical baseline is used for alarm protocols
<b>Sampling volume</b>	1.2 liter per min of ambient air nominal
<b>Communication</b>	RS-232 or wireless BioLink
<b>Data storage</b>	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.
<b>Alarms</b>	Electronic digital alarm; Red LED and >100dB piezoacoustic alarm on unit
<b>Power</b>	4.8 watts at 13 VDC to 36 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.
<b>Continuous operating time</b>	Essentially unlimited if powered externally, or 30 hours on BA-5590 primary battery
<b>Pump life</b>	30,000 - 40,000 operating hours.
<b>Operating temperature range</b>	-20°C to 60°C. Operation to 60°C is permitted up to a total time of 1000 hours.
<b>Humidity</b>	0 to 95% non-condensing
<b>Consumables</b>	None
<b>Size</b>	15.60 x 17.00 x 33.50 cm without inlet air stack attached; 15.60 x 17.00 x 40.00 cm with inlet stack attached 15.60 x 14.53 x 40.00 cm without handle
<b>Weight</b>	3.4 kg without battery / 4.4 kg with battery
<b>Package</b>	EMI-resistant aluminum shell

*Research International reserves the right to change specifications without prior notice.*

### Research International, Inc.

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