

SmartBio™ Sensor

REAL-TIME FIELD PORTABLE BIOLOGICAL AGENT DETECTOR



Feature Highlights

- Real-time detection of bioagents in air
- Easily portable
- Low power requirements
- No fluidics or additional reagents required
- Detects genetically modified agents

The portable and rugged SmartBio Sensor detects and classifies bacteria/virus and bacterial spores/toxins in real-time. It also responds to unanticipated or genetically modified organisms while maintaining its low response to common biological and chemical interferences in the environment.

The SmartBio Sensor uses an 8 sensor array and an integrated airborne particle counter to provide more selectivity and a greater immunity to interferences compared to intrinsic bio-fluorescence based techniques.

The detector utilizes a pair of easy-to-change low cost sensor coupons which retain collected microbes for further analysis

The SmartBio Sensor is backed by first rate service, training and support to ensure optimum product performance.

Smiths Detection is a leading worldwide provider of government regulated technology products and advanced services that aid in the detection and identification of chemical, biological, radiological, nuclear and explosive (CBRNE) material and other dangerous or illegal substances.

Technical Data SmartBio™ Sensor

General Specifications

Principle of Operation	Multichannel fluorescence and pattern recognition
Agent Classes Detected	Bacteria/virus or bacterial spores/ toxins
Detection Channels	8 fluorescent chemical sensors 2 particle counting channels
Operation Mode	Continuous sampling
Startup Time	< 10 min.
Response Time	Detect < 2 min., Classify < 5 min.
Size (H X W X D)	Without battery: 14" x 8" x 7" (35.6 x 20.3 x 17.8 cm) With battery: 17" x 8" x 7" (43.2 x 20.3 x 17.8 cm)
Weight	Without battery: 22 pounds (10.0 kg) With battery: 27 pounds (12.2 kg)
Power	90-240 VAC (47-440 Hz) 9-36 VDC
Battery	UBI-2590 rechargeable (approx. 8 hours) BA-5390 non-rechargeable (approx. 12 hours)
Operating Temperature	32° to +122° F (0° to +50° C)
Air Sampling	3 integrated pumps (two 10L/min and one 2.5L.min)
Coupon Shelf Life	9 months stored in refrigeration at 2-8C
Communications	Serial via RS-232
On-board Memory	128 MB Compact flash
User Interface	On-board alarm and status indicators SBS Display computer software to view data via RS-232

Examples of Agents & Simulants Tested

Bacteria	<i>B. globigii</i> , <i>B. subtilis</i> , <i>B. cereus</i> , <i>B. cepacia</i> , <i>E. herbicola</i> , <i>E. amylovora</i> , <i>S. aureus</i> , <i>E. coli</i> , <i>Y. pestis</i>
Spores	<i>B. anthracis</i> , <i>B. globigii</i> , <i>B. subtilis</i> , <i>B. cereus</i> , <i>B. thuringiensis</i>
Viruses	MS2, SP10, BC1
Toxins	OVA, BSA, Cholera toxin, Cecropins, Taipoxin

Applications

Designed for	Marine Corps Systems Command Military and Homeland Security defense Civilian first responders
Applications	Portable biological detection system Warning system for force or installation protection
Third party testing	Conducted at industry labs and government labs in the US and UK



Americas

USA DoD/ER Sales

21 Commerce Drive
Danbury, CT 06810 USA
T: +1 203 207 9700
F: +1 203 207 9780
Toll Free: +1 888 473 6747
E: gmer:americas@smithsdetection.com

Canada & Latin America Military/ER Sales

3225 Francis-Hughes, Suite 100
Laval, Quebec
H7L 5A5 Canada
T: +450 967 0010
F: +450 967 0015
E: gmer:americas@smithsdetection.com

Military Programs

2202 Lakeside Blvd.
Edgewood, MD 21040 USA
T: +1 410 612 4000
F: +1 410 510 9495
E: gmer:americas@smithsdetection.com

Europe/Middle East/Africa

Military/ER Sales and Military Programs

459 Park Avenue
Bushey, Watford
Herts WD23 2BW UK
T: +44 (0) 1923 658 000
F: +44 (0) 1923 240 285
E: gmer:emea@smithsdetection.com

Asia Pacific

Military/ER Sales and Military Programs

100 Beach Road
#20-06 Shaw Towers
Singapore 189702
T: +65 6 466 1700
F: +65 6 469 2506
E: gmer:emea@smithsdetection.com

Service

For General Service Inquiries

T: +1 203 207 9700 (Americas)
T: +44 (0) 1923 658000 (E/ME/A)
T: +65 6 466 1700 (Asia Pacific)

Smiths Detection
2202 Lakeside Blvd.
Edgewood, MD 21040 USA