



## Bid Specifications: MSA BIOSENSOR™ 2200R Biological Agent Detector

PHYSICAL CHARACTERISTICS	
Size	Unit shall not exceed 11" x10" x 5" in total size.
Weight	Unit shall not exceed 7 lbs.
Enclosure Type	The enclosure shall be made of a Pelican case.
Enclosure Features	The unit shall be fully deconable and washable.
Ingress Protection	The unit shall have an IP Rating of IP67.

OPERATION	
Total Test Time	The unit shall have the ability to perform the entire test, including sampling, in less than 5 minutes.
Sample Analysis Time	The unit shall have the ability to perform the analysis of the sample in 4 minutes.
System Power Requirements	The unit shall operate on an internal battery or 120VAC.
Number of tests per charge	The unit shall be capable of running at least 50 tests on a fully charged battery.
Control	The unit shall be capable of verifying results via both positive and negative controls.
RFID Capable	The unit shall be capable of automatically identifying the test cartridge via RFID technology.
Data Storage	The unit shall be capable of storing the last 50 tests including target type, cartridge serial number, and the results of the test.

BIOLOGICAL AGENTS		
Technology	Biological agents shall be detected utilizing immunassay technology	
Biological Agent Specifications	<b>Biological agent</b>	<b>Minimum Detectability</b>
	Anthrax	<10,000 spores
	Ricin	<1 ng
	SEB	<1 ng
Multiplex Testing	The unit shall be capable of testing multiple biological agents simultaneously such as Anthrax and Ricin.	
Selectivity	The unit shall be able to detect 12,000 anthrax spores with a statistical false positive alarm rate of <1 in a million.	
Non-Destructive Test	The unit shall be capable of performing a non-destructive test and retaining the sample for potential lab testing or evidence.	
Cartridge shelf life	The test cartridge shall have a minimum shelf life of 12 months at room temperature.	
Disposable cartridge	The test cartridge shall be disposable.	

VALIDATION	
Third Party Testing	The unit shall have been 3rd party tested by at least 2 different independent test facilities including University of Alabama at Birmingham (UAB), New York State Department of Health (NYDOH).

SAMPLING TECHNIQUE	
Sample type	The unit shall be capable of sampling either wet or dry samples.

## USER INTERFACES

Communication	The unit shall communicate to a computer either wireless or RS-232 interface for data retrieval.
Display	The unit shall display instructions on a 4 line LCD display.
Buttons	The unit shall be operated via 4 pushbuttons.
Backlight	The unit shall have a backlight for the display.
On Screen Instructions	The unit shall display detailed step-by-step test and sampling instructions directly on the LCD of the unit.
Alarms	The unit shall possess both audible and visual alarms within the unit.
Visual Test Indicators	The unit shall possess both green and red LED indicators to illustrate negative and positive test results respectively.

## CALIBRATION REQUIREMENTS

Biological	No calibration shall be required; however, recommended every 6 months. Calibration method of the unit shall be with a calibration cartridge.
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## ENVIRONMENTAL

Temperature	5° to +40°C (41° to +104°F)
Humidity	Operating Humidity range 0-95% RH, non-condensing.

## WARRANTY

Base Unit	Instrument shall have one year parts and labor standard warranty with an extended five year total warranty available.
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