

Alexeter Biological Defense Systems™

Description and Specifications



Guardian Reader System™



Defender TSR™



**Intricate
Systems**

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Alexeter *Biological Defense Systems*[™]

Alexeter Technologies provides a complete solution for biological readiness and response, Alexeter Reader Systems[™]. From collection, to identification, decontamination, technical support and training, Alexeter provides the top-rated *Guardian Reader System*[™]. The *Guardian Reader System* is now being used by 1600 first responders, military services, security agencies, health departments and corporate clients. The *Guardian Reader System* is the first choice of response professionals.. Our new *Defender TSR*, a hand-held device which offers increased sensitivity and faster results. Alexeter's Readers allow you to run tests in parallel, a capability unique to Alexeter Readers, minimizing response time. With the *Defender TSR*, you can run 8 tests in under 30 minutes. The *Guardian* can do the same in under 40 minutes.

1. *Bio-Detect*[™] Test Strips

Our *Bio-Detect* Tests address the threats that we have already seen, as well as other potential threats as defined by the DHS and other authorities. All Alexeter *Bio-Detect Test* strips contain Radio Frequency Identification microchips (RFID's). The RFID contains crucial information, including: test type, specific lot information and expiration date. No calibration is ever needed, as the RFID provides all of the information that the Reader needs to perform an accurate identification. The results of your test are also written back to the RFID. We offer the most complete set of field tests:

- *Anthrax*
- *Ricin*
- *Botulinum Toxin*
- *Staphylococcal Enterotoxin B (SEB)*
- *Plague*
- *Tularemia*
- *Brucella* (available Summer 2008)
- *Orthopox* (available Summer 2008)

2. *Guardian Reader*[™]

Designed from the "ground-up" as a field-test unit, *Guardian Reader* provides an objective, quantitative result for each test strip, maximizing the sensitivity of the test while minimizing the probability of user error and misinterpretation. This rugged unit can be run in the field on AC or battery power. Data transfer may be accomplished using the serial port on the *Guardian*.

3. *Defender TSR*[™]

The *Defender TSR*, the first hand-held biological detection and identification on the market, provides all of the benefits of the *Guardian*, adding advanced optics, unparalleled ease-of-use and full wireless capabilities. The *Defender* is compatible with a variety of (optional) infrared printers. USB and WiFi (802.11b) connectivity make easy to transfer your results to a PC.

4. *Guardian Reader System Training*

Every system includes on-site *Guardian Basic System Training*, designed to get your team up to speed in sampling techniques and use of the *Guardian Reader*. This is a hands-on class is intended for Hazmat professionals.

5. *Alexeter Elite Programs*

The *Alexeter Elite Program*[™] covers your needs for all test equipment and consumables, at a fixed cost, for a time period you choose: either 3 or 5 years. Under the *Elite program*, all expiring biological test strips and collection kits will be replaced approximately 4 weeks before their expiration dates, giving you full testing capabilities for the term of the program.

6. *Alexeter 24-Hour Support Line for Guardian Reader System Users*

Alexeter's user support is unmatched in the industry. During a response, we encourage you to call us for advice: from any location, from any time zone. Our technical experts are available to you 24 hours a day, every day of the year. Our 24-hour number is now written into many organizations' current response protocol.

Defender TSR™



Raising the Standard

Hand-Held Biological Identification For Emergency Response and IAQ Monitoring

The *Guardian Reader System™*, currently the world's leading rapid biological detection & identification solution, has taken the next logical step: introducing field-portable capabilities for HAZMAT and Industrial IAQ Specialists. The *Defender TSR* (Test Strip Reader) features Alexeter's intuitive software and a high resolution color screen that sets a new standard for ease-of-use.

Truly hand-held, the *Defender TSR* is field-ready with a current offering of 8 biological tests, with more to come. The *Defender* also boasts improved sensitivity in this smaller package. Connectivity is near-universal with dual-wireless capabilities WiFi (802.11b), Bluetooth® and USB interface. The *Defender* connects seamlessly to any network, including the Internet, allowing secure data transmission for technical support and documentation.

Whenever you need help, Alexeter's Technical Support team can view your results, assisting you in near real-time with any issue.



Commercial Biological Defense Systems

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Features and Specifications

Combined, the *Defender TSR* (Test Strip Reader) and Alexeter's *Bio-Detect Test™* strips offer maximum portability, sensitivity and well as the most complete set of biological tests currently available. Field-ready, this 1.5 lb unit offers improved performance and the flexibility of industry-standard software. Step-by-step on-screen instructions guide you through the simple testing process. Our legendary 24/7 Technical Assistance Support Line is always standing by if you need more help.

BIOLOGICAL ANTIGENS DETECTED

Anthrax, Ricin, Botulinum Toxin (A and B), Staphylococcal Enterotoxin B, Plague, Tularemia, Brucella, Orthopox, Stachybotrys*, Penicillium* and Aspergillus*

FIELD USE DATA

Setup Time: 30 seconds

Calibration: Automatic, no user input required

Test Modes: Manual and Automatic

Test Time:

- First test: 18 minutes
- 8 tests run in parallel: 24 min.
- Throughput: 60 tests/hour

User interface:

High-resolution color screen, audible and visual user prompts, on-screen countdown for automatic mode test

Training:

Integrated user tutorial on instrument

Transport:

Rugged design and custom case enclosure for transport and storage

Battery Life:

6 hours, 10 hours with optional battery pack, continuous with 120-240 V AC

HARDWARE

Weight: 1.5 pounds (0.7 kg)

Size: Ergonomic handheld design for gloved operation

Platform: Fully enclosed and integrated HP IPAQ™ Pocket PC

Operating system: Windows Mobile™ (CE 4.2)

Screen: 4-inch VGA day-viewable, high resolution TFT color display touch-screen

Input: Mousepad navigation or stylus entry methods

Security: Password-protected access

Memory: 128 MB, expandable to 1 GB

CONNECTIVITY

- WiFi (encrypted 802.11x) and Bluetooth® for wireless connection to your network
- USB Port for wired connectivity with PC's

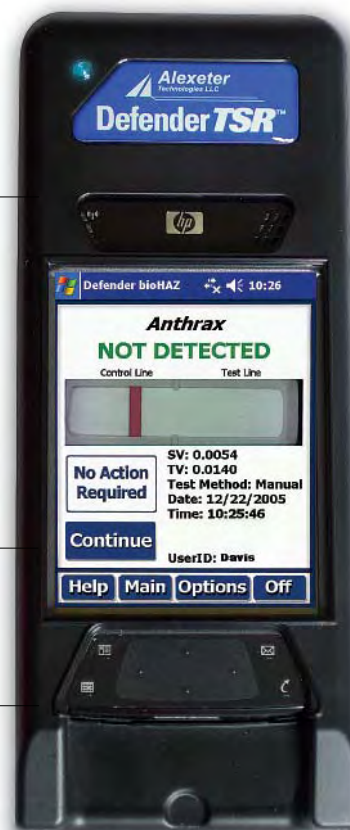
OPTIONS

- GPS add-on capability
- 1 GB memory upgrade
- HAZMAT Database and Aerial Dispersion software available
- IrDA (wireless infrared) printer
- Extended internal battery module
- Rugged soft rubber sleeve for additional protection

* In development



Field ready, the entire system weighs 7 lbs.



Alexeter
Technologies LLC

Commercial Biological Defense Systems

Alexeter Readers: *Defender TSR* and *Guardian* Give You a Clear Advantages

Although all of our tests may be read visually, the *Defender™* or *Guardian Reader™* will document your results and will alert you to positive tests that may be missed due to poor lighting or because of low sample concentrations. It will also prevent you from erroneously reporting positive results by “seeing” lines that are not there.

As you look at the examples below, remember that the intensity of the sample line (below red arrows) is proportional to the concentration of the biological agent present in the sample. All tests will display a visible control line (below black arrows) of higher intensity, to confirm that the test has been run correctly. If necessary, use Adobe Acrobat’s Zoom Feature to get a better look at the lines shown below:

Sample Line	Control Line
Guardian BTA™ Reader Results	
<i>Bacillus thuringiensis (Bt)</i> (>2 mg/ml)	Guardian BTA TEST: ANTHRAX USER ID: 24 SAMP ID: 000 Negative SV: 0.0019 TV: 0.0100 CART #: <i>Bt 2mg/ml</i> IN RFID: NO DATE: 07-09-01 TIME: 16:08 GMT LOT #: _____
<i>Bacillus anthracis (Ba)</i> (1:2 dilution)	Guardian BTA TEST: ANTHRAX USER ID: 24 SAMP ID: 2 POSITIVE SV: 0.1204 TV: 0.0100 CART #: <i>BA 1/2</i> IN RFID: NO DATE: 07-09-01 TIME: 16:05 GMT LOT #: _____
<i>Bacillus anthracis (Ba)</i> (1:10 dilution)	Guardian BTA TEST: ANTHRAX USER ID: 24 SAMP ID: 10 POSITIVE SV: 0.0493 TV: 0.0100 CART #: <i>BA 1/10</i> IN RFID: NO DATE: 07-09-01 TIME: 16:26 GMT LOT #: _____
<i>Bacillus anthracis (Ba)</i> (1:20 dilution)	Guardian BTA TEST: ANTHRAX USER ID: 24 SAMP ID: 20 POSITIVE SV: 0.0320 TV: 0.0100 CART #: <i>BA 1/20</i> IN RFID: NO DATE: 07-09-01 TIME: 16:00 GMT LOT #: _____
<i>Bacillus anthracis (Ba)</i> (1:100 dilution)	Guardian BTA TEST: ANTHRAX USER ID: 24 SAMP ID: 100 POSITIVE SV: 0.0104 TV: 0.0100 CART #: <i>BA 1/100</i> IN RFID: NO DATE: 07-09-01 TIME: 16:35 GMT LOT #: _____

Negative result: This is not *Bacillus anthracis* and therefore there is no visible sample line. The Reader measures the sample value (SV) at .00015, well below the threshold value (TV) of 0.010.

Strong positive result: The sample line is clearly visible and the Reader confirms the visual result with a sample value of 0.1204, well over the threshold value of 0.0100.

Positive result: The sample line is weaker than above, but still clearly visible. The Reader confirms the visual result with a sample value of 0.0490, well above the threshold value.

Positive result: The sample line is barely visible to the naked eye. Untrained users may miss this positive result. The Reader confirms with a sample value of 0.0320.

Positive result! Although the sample line is not readily visible to most observers, the Reader measures a sample value of .0104, just above the threshold value.

Alexeter Anthrax (*b. anthracis*) Bio-Detect Test™ Specifications

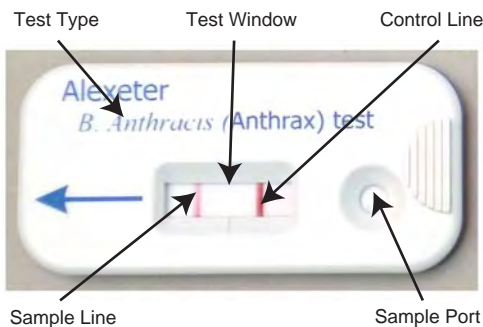
Description and Intended Use:

The *Guardian Reader™*, *Defender TSR™* and *BioCapture 650™* are all designed to accept all *Alexeter Bio-Detect Test* strips. *Alexeter Bio-Detect Test* strips are intended to screen environmental samples for the biological threats (antigens) listed below. A positive test result indicates the presence of the antigen at or above the detectable concentration (threshold), which is also listed below. THESE TESTS ARE NOT INTENDED FOR MEDICAL OR DIAGNOSTIC USE.

Principles of Operation:

The *Alexeter Anthrax Bio-Detect Test* strip is a lateral-flow immunochromatographic device that uses two antibodies in combination to specifically detect the antigen in solution. One of the specific antibodies is labeled with a colloidal gold derivative. When sufficient antigen is present, the colloidal gold label provides a reddish-brown colored line that is visualized after accumulating in the test sample region on the device.

When a sample is added to the *Alexeter Bio-Detect Test* strip, the sample begins to mix with the colloidal gold-labeled antibody and simultaneously moves along the strip membrane by capillary action. In the sample region of the test strip, if the antigen is present, the second specific antibody captures the colloidal gold-labeled antibody and bound antigen, forming a colored line or band in the sample (left side) window of the test strip. As an internal control, a second band will appear in the control (right side) window of the test strip is an indication that the test strip functioned properly. Two bands or colored lines are required for a positive result determination.



Specificity:

The *Alexeter Anthrax Bio-Detect Test* strip has been tested against other bacterial strains, toxic substances and potential environmental interferants. All *Alexeter Bio-Detect* tests give negative results when tested against the following panel of interferants: bovine serum albumin (BSA), SEB, Barley flour, Epsom salts, gypsum powder, artificial sugar, powdered creamer, sucrose, aspirin, chicken seasoning,

table salt, table sugar, household dust, talcum powder, non-fat dry milk, wheat flour, baking soda, baking powder, laundry detergent, and purified water.

In addition, the Anthrax *Bio-Detect* test gives negative results against the numerous non-*B. anthracis* bacterial species tested up to 1 x 10⁸ spores/ml, including:

	ATCC #
<i>B. cereus</i>	10702
<i>B. brevis</i>	8185
<i>B. subtilis</i>	9372
<i>B. subtilis</i>	31028
<i>B. Thuringiensis</i>	33679
<i>B. subtilis</i>	6633
<i>B. thuringiensis</i>	35646
<i>B. thuringiensis</i>	770872
<i>B. cereus</i>	14579
<i>Y. pestis</i>	N/A

Storage:

All *Alexeter Bio-Detect Test* strips should be stored at room temperature (15°-30°C).

Shelf Life:

All *Alexeter Bio-Detect Test* strips can be used confidently until the expiration date printed on each foil package.

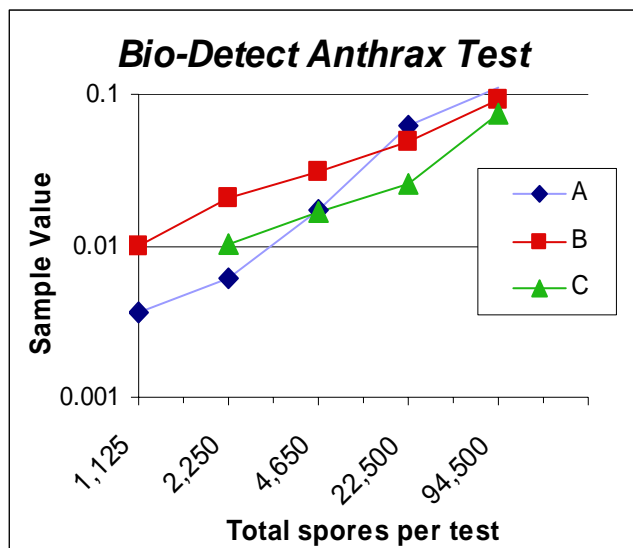
Sensitivity:

Alexeter Bio-Detect Test strips display superior sensitivity levels compared to major competitor. Due to the variable nature of bacterial antigen preparations, absolute test sensitivity can vary for any given sample. Representative relative performances and sensitivities are displayed below. Units are expressed as concentrations of spores per milliliter (ml) of sample or total spores added per test.

Relative Test Result Comparison on Ames Strain with major competitor

Spores/ml	Alexeter	Other
3.80E+04	5/5	0/1
6.33E+04	5/5	0/1
1.27E+05	5/5	0/1
3.80E+05	5/5	1/1
7.60E+05	5/5	1/1

The *Alexeter Anthrax Bio-Detect* test detects all the major strains of anthrax. As displayed in the following chart, positive results (Sample Values greater than 0.01) are obtained for three different major anthrax strains at levels between approximately 1,125 and 4,600 spores per test.



Alexeter Bio-Detect Test strips are manufactured and distributed by Alexeter Technologies, LLC, Wheeling, IL

NOTE: As with all screening tests, results from the any Alexeter Bio-Detect Test strip should be confirmed by a qualified reference laboratory.

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Alexeter Ricin Bio-Detect Test™ Specifications

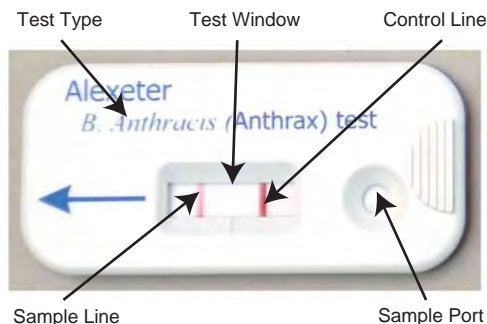
Description and Intended Use:

The *Guardian Reader™*, *Defender TSR™* and *BioCapture 650™* are all designed to accept all *Alexeter Bio-Detect Test* strips. *Alexeter Bio-Detect Test* strips are intended to screen environmental samples for the biological threats (antigens) listed below. A positive test result indicates the presence of the antigen at or above the detectable concentration (threshold), which is also listed below. THESE TESTS ARE NOT INTENDED FOR MEDICAL OR DIAGNOSTIC USE.

Principles of Operation:

The *Alexeter Ricin Bio-Detect Test* strip is a lateral-flow immunochromatographic device that uses two antibodies in combination to specifically detect the antigen in solution. One of the specific antibodies is labeled with a colloidal gold derivative. When sufficient antigen is present, the colloidal gold label provides a reddish-brown colored line that is visualized after accumulating in the test sample region on the device.

When a sample is added to the *Alexeter Bio-Detect Test* strip, the sample begins to mix with the colloidal gold-labeled antibody and simultaneously moves along the strip membrane by capillary action. In the sample region of the test strip, if the antigen is present, the second specific antibody captures the colloidal gold-labeled antibody and bound antigen, forming a colored line or band in the sample (left side) window of the test strip. As an internal control, a second band visualized in the control (right side) window of the test strip is an indication that the test strip functioned properly. Two bands or colored lines are required for a positive result determination.



Specificity:

The *Alexeter Ricin Bio-Detect Test* strip has been tested against other bacterial strains, toxic substances and potential environmental interferants. All *Alexeter Bio-Detect* tests give negative results when tested against the following panel of interferants: bovine serum albumin (BSA), SEB, Barley flour, Epsom salts, gypsum powder, artificial sugar, powdered creamer, sucrose, aspirin, chicken seasoning, table salt, table sugar, household dust, talcum powder, non-fat dry milk, wheat flour, baking soda, baking powder, laundry detergent, and purified water.

Storage:

All *Alexeter Bio-Detect Test* strips should be stored at room temperature (15°-30°C).

Shelf Life:

All *Alexeter Bio-Detect Test* strips can be used confidently until the expiration date printed on each foil package.

Sensitivity:

Alexeter Bio-Detect Test strips display high sensitivity levels. Note that due to the variable nature of antigen preparations, actual test sensitivity can vary for a given sample. Representative sensitivities are listed below.

	<u>+/tests*</u>	<u>SV#/Mean</u>
0 ng/ml	0/3	0.0030
5 ng/ml	3/3	0.0262
10 ng/ml	3/3	0.0451
30 ng/ml	3/3	0.1240

*Positive Tests/Total Tests

#SV = Sample Values as determined on Alexeter's Guardian or Defender TSR Readers. A positive SV value is generally at or above 0.012 or greater.

Alexeter Bio-Detect Test strips are manufactured and distributed by Alexeter Technologies, LLC, Wheeling, IL

NOTE: As with all screening tests, results from the any *Alexeter Bio-Detect Test* strip should be confirmed by a qualified reference laboratory.

Alexeter Botulinum Toxin A/B Bio-Detect Test™ Specifications

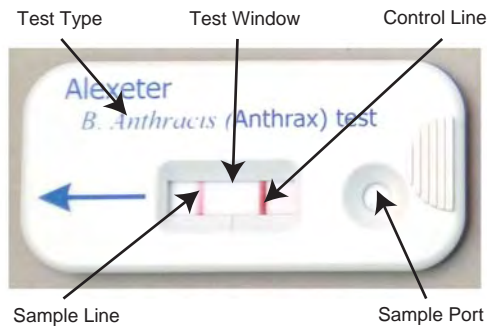
Description and Intended Use:

The *Guardian Reader™*, *Defender TSR™* and *BioCapture 650™* are all designed to accept all *Alexeter Bio-Detect Test strips*. *Alexeter Bio-Detect Test strips* are intended to screen environmental samples for the biological threats (antigens) listed below. A positive test result indicates the presence of the antigen at or above the detectable concentration (threshold), which is also listed below. THESE TESTS ARE NOT INTENDED FOR MEDICAL OR DIAGNOSTIC USE.

Principles of Operation:

The *Alexeter Bot Tox Bio-Detect Test strip* is a lateral-flow immunochromatographic device that uses two antibodies in combination to specifically detect the antigen in solution. One of the specific antibodies is labeled with a colloidal gold derivative. When sufficient antigen is present, the colloidal gold label provides a reddish-brown colored line that is visualized after accumulating in the test sample region on the device.

When a sample is added to the *Alexeter Bio-Detect Test strip*, the sample begins to mix with the colloidal gold-labeled antibody and simultaneously moves along the strip membrane by capillary action. In the sample region of the test strip, if the antigen is present, the second specific antibody captures the colloidal gold-labeled antibody and bound antigen, forming a colored line or band in the sample (left side) window of the test strip. As an internal control, a second band visualized in the control (right side) window of the test strip is an indication that the test strip functioned properly. Two bands or colored lines are required for a positive result determination.



Specificity:

The *Alexeter Bot Tox Bio-Detect Test strip* has been tested against other bacterial strains, toxic substances and potential environmental interferants. All *Alexeter Bio-*

Detect tests give negative results when tested against the following panel of interferants: bovine serum albumin (BSA), SEB, Barley flour, Epsom salts, gypsum powder, artificial sugar, powdered creamer, sucrose, aspirin, chicken seasoning, table salt, table sugar, household dust, talcum powder, non-fat dry milk, wheat flour, baking soda, baking powder, laundry detergent, and purified water.

Storage:

All *Alexeter Bio-Detect Test strips* should be stored at room temperature (15°-30°C).

Shelf Life:

All *Alexeter Bio-Detect Test strips* can be used confidently until the expiration date printed on each foil package.

Sensitivity:

Alexeter Bot Tox Bio-Detect Test strips display high sensitivity levels. Note that due to the variable nature of antigen preparations, actual test sensitivity can vary for a given sample. Representative sensitivities are listed below.

Result: [Concentration]	<u>+/tests*</u>	<u>SV#/Mean</u>
Toxin A		
0 ng/ml	0/3	0.0037
30 ng/ml	3/3	0.0187
100 ng/ml	3/3	0.0369
500 ng/ml	3/3	0.1240
Toxin B		
500 ng/ml	1/1	0.0127

*Positive Tests/Total Tests

#SV = Sample Values as determined on Alexeter's *Guardian* or *Defender TSR Readers*. A positive SV value is generally at or above 0.012 or greater.

Alexeter Bio-Detect Test strips are manufactured and distributed by Alexeter Technologies, LLC, Wheeling, IL

NOTE: As with all screening tests, results from the any *Alexeter Bio-Detect Test strip* should be confirmed by a qualified reference laboratory.

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Alexeter Staphylococcal Enterotoxin B (SEB) Bio-Detect Test™ Specifications

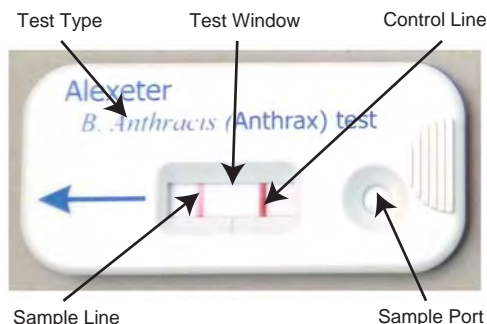
Description and Intended Use:

The *Guardian Reader™*, *Defender TSR™* and *BioCapture 650™* are all designed to accept all *Alexeter Bio-Detect Test* strips. *Alexeter Bio-Detect Test* strips are intended to screen environmental samples for the biological threats (antigens) listed below. A positive test result indicates the presence of the antigen at or above the detectable concentration (threshold), which is also listed below. THESE TESTS ARE NOT INTENDED FOR MEDICAL OR DIAGNOSTIC USE.

Principles of Operation:

The *Alexeter SEB Bio-Detect Test* strip is a lateral-flow immunochromatographic device that uses two antibodies in combination to specifically detect the antigen in solution. One of the specific antibodies is labeled with a colloidal gold derivative. When sufficient antigen is present, the colloidal gold label provides a reddish-brown colored line that is visualized after accumulating in the test sample region on the device.

When a sample is added to the *Alexeter Bio-Detect Test* strip, the sample begins to mix with the colloidal gold-labeled antibody and simultaneously moves along the strip membrane by capillary action. In the sample region of the test strip, if the antigen is present, the second specific antibody captures the colloidal gold-labeled antibody and bound antigen, forming a colored line or band in the sample (left side) window of the test strip. As an internal control, a second band visualized in the control (right side) window of the test strip is an indication that the test strip functioned properly. Two bands or colored lines are required for a positive result determination.



Specificity:

The *Alexeter SEB Bio-Detect Test* strip has been tested against other bacterial strains, toxic substances and potential environmental interferants. All *Alexeter Bio-Detect* tests give negative results when tested against the following panel of interferants: bovine serum albumin (BSA), Barley flour, Epsom salts, gypsum powder, artificial sugar, powdered creamer, sucrose, aspirin, chicken seasoning, table salt, table sugar, household dust, talcum powder, non-fat dry milk, wheat flour, baking soda, baking powder, laundry detergent, and purified water.

Storage:

All *Alexeter Bio-Detect Test* strips should be stored at room temperature (15°-30°C).

Shelf Life:

All *Alexeter Bio-Detect Test* strips can be used confidently until the expiration date printed on each foil package.

Sensitivity:

Alexeter SEB Bio-Detect Test strips display high sensitivity levels. Note that due to the variable nature of antigen preparations, actual test sensitivity can vary for a given sample. Representative sensitivities are listed below.

Result: [Concentration]	+/tests*	SV [#] /Mean
0 µg/ml	0/3	0.0041
0.03 µg/ml	0/3	0.0087
0.10 µg/ml	3/3	0.0284
0.33 µg/ml	3/3	0.0783

*Positive Tests/Total Tests

[#]SV = Sample Values as determined on Alexeter’s *Guardian* or *Defender TSR* Readers. A positive SV value is generally at or above 0.012 or greater.

Alexeter Bio-Detect Test strips are manufactured and distributed by Alexeter Technologies, LLC, Wheeling, IL

NOTE: As with all screening tests, results from the any *Alexeter Bio-Detect Test* strip should be confirmed by a qualified reference laboratory.

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Alexeter Plague (*Y. pestis*) Bio-Detect Test™ Specifications

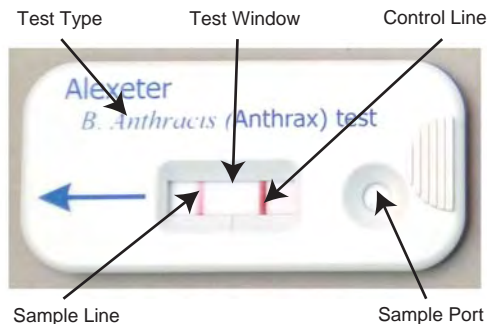
Description and Intended Use:

The *Guardian Reader™*, *Defender TSR™* and *BioCapture 650™* are all designed to accept all *Alexeter Bio-Detect Test* strips. *Alexeter Bio-Detect Test* strips are intended to screen environmental samples for the biological threats (antigens) listed below. A positive test result indicates the presence of the antigen at or above the detectable concentration (threshold), which is also listed below. THESE TESTS ARE NOT INTENDED FOR MEDICAL OR DIAGNOSTIC USE.

Principles of Operation:

The *Alexeter Plague Bio-Detect Test* strip is a lateral-flow immunochromatographic device that uses two antibodies in combination to specifically detect the antigen in solution. One of the specific antibodies is labeled with a colloidal gold derivative. When sufficient antigen is present, the colloidal gold label provides a reddish-brown colored line that is visualized after accumulating in the test sample region on the device.

When a sample is added to the *Alexeter Bio-Detect Test* strip, the sample begins to mix with the colloidal gold-labeled antibody and simultaneously moves along the strip membrane by capillary action. In the sample region of the test strip, if the antigen is present, the second specific antibody captures the colloidal gold-labeled antibody and bound antigen, forming a colored line or band in the sample (left side) window of the test strip. As an internal control, a second band visualized in the control (right side) window of the test strip is an indication that the test strip functioned properly. Two bands or colored lines are required for a positive result determination.



Specificity:

The *Alexeter Plague Bio-Detect Test* strip has been tested against other bacterial strains, toxic substances and potential environmental interferants. All *Alexeter Bio-Detect* tests give negative results when tested against the following panel of interferants: bovine serum albumin (BSA), Barley flour, Epsom salts, gypsum powder, artificial sugar, powdered creamer, sucrose, aspirin, chicken seasoning, table salt, table sugar, household dust, talcum powder, non-fat dry milk, wheat flour, baking soda, baking powder, laundry detergent, and purified water.

Storage:

All *Alexeter Bio-Detect Test* strips should be stored at room temperature (15°-30°C).

Shelf Life:

All *Alexeter Bio-Detect Test* strips can be used confidently until the expiration date printed on each foil package.

Sensitivity:

Alexeter Plague Bio-Detect Test strips display high sensitivity levels. Note that due to the variable nature of antigen preparations, actual test sensitivity can vary for a given sample. Representative sensitivities are listed below.

Result: [Concentration]	+/tests*	SV#/Mean
0 µg/ml	0/3	0.0035
0.3 µg/ml	0/3	0.0068
1.0 µg/ml	3/3	0.0208
3.3 µg/ml	1/1	0.0662

*Positive Tests/Total Tests

#SV = Sample Values as determined on Alexeter's *Guardian* or *Defender TSR* Readers. A positive SV value is generally at or above 0.012 or greater.

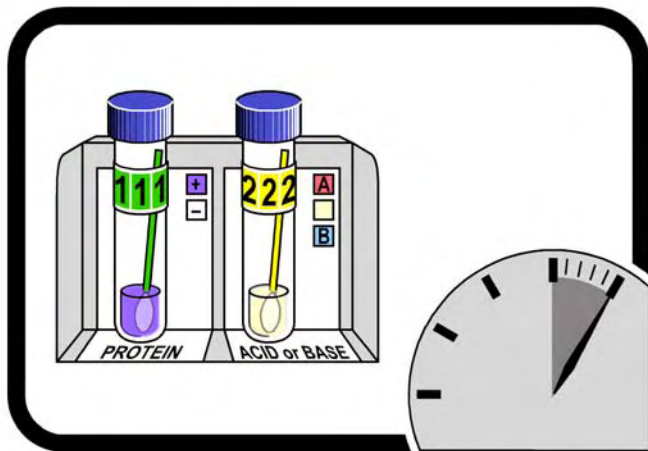
Alexeter Bio-Detect Test strips are manufactured and distributed by Alexeter Technologies, LLC, Wheeling, IL

NOTE: As with all screening tests, results from the any *Alexeter Bio-Detect Test* strip should be confirmed by a qualified reference laboratory.

BIOCHECK™ POWDER SCREENING TEST KIT

20/20 GeneSystems' **BIOCHECK™** Kit helps first responders quickly determine--by looking for a color change--whether a suspicious powder may contain a bio-terror agent. This is the first step in a multi-step system for determining whether a pathogen or toxin may be present.

Principle The product works primarily by using **PurpleHaze™** Technology to identify protein, which is found in all living material. All bio-warfare agents—including anthrax and ricin—contain protein. On the other hand, many harmless substances frequently mistaken to be potential bio-terror agents, such as powdered sugar, drywall dust, cornstarch, and many cosmetics—do not. The **BIOCHECK™** Powder Screening Test Kit also includes a pH test that provides additional information about the sample.



PLEASE NOTE THE FOLLOWING BEFORE USE:

- For use by public safety professionals ONLY. Not for consumer use.
- This product is for FIELD USE ONLY and is not intended for diagnostic or laboratory use.
- Further agent-specific testing by bacterial culture, DNA testing and/or antibody tests is required before a definitive assessment can be made as to whether a particular pathogen or toxin is present.
- Some safe substances that contain protein—such as baker's yeast—will test positive with the **BIOCHECK** Kit. Thus, further testing is always required if a positive result is seen.
- This product is designed to identify the presence of visible quantities of toxins or pathogens. It is not intended for environmental sampling or monitoring.
- To be detected, the bio-hazardous material must be present in amounts of equivalent to 100 µg or more (approximately half the size of a pencil eraser).

Method The protocol is fast and easy to perform. A sample is first collected on two chemically treated swabs which are provided with the kit. Each swab is then immersed in a solution that produces a color change within five minutes indicating whether protein is present in the sample.

IMPORTANT:

1. Use only the swabs provided in the kit. **2.** Hold the tube against the rack when removing the caps. The kit contains a protein positive control that is used **only** if a negative result for protein is obtained. When it is used, make sure the head of this swab is fully immersed in the solution at the bottom of protein test tube.

Examples of Results Obtained with the **BIOCHECK** Kit

Sample	Protein Test	pH Test	CONCLUSION
Potential pathogen or toxin or harmless substance containing protein (e.g., anthrax, ricin, yeast, cornmeal)	PURPLE (+)	PALE YELLOW	Further testing required: proceed to agent-specific test
Unlikely to be a bio-threat (e.g., sugar, cornstarch, dry wall dust)	NO CHANGE (-) AND Positive Control PURPLE (+)	PALE YELLOW OR RED or BLUE	BIOLOGICAL THREAT UNLIKELY

1 Remove tube carrier, remove swab pouches.

2 Place on level surface, take caps off (don't swap caps).

3 Open **PROTEIN DETECTION** pouch, rub swab in sample, place swab in **PROTEIN** tube (1).

4 Open **pH MEASUREMENT** pouch, rub swab in sample, place in **ACID** or **BASE** tube (2).

5 Put caps on tubes, wait 5 minutes.

6 Evaluate liquid colors:

ACID or BASE test	A Acidic sample
	N Neutral sample
	B Basic sample
PROTEIN test	+ Likely to contain biological material
	- Not likely to contain biological material

If PROTEIN test is negative (no color change), then perform confirmatory test:

- Open **CONTROL** pouch, but *do not* rub in sample.
- Place swab *directly* in **PROTEIN** tube (1) where it is visible.
- Immerse swab in liquid (shake if needed).
- Wait 5 minutes, then evaluate color in **PROTEIN** tube (1):

Potential biohazard. Further testing required.

+	Test valid.
-	Test not valid: test again using new kit.

The State of the Art in Biological Air Sampling

The BioCapture® 650 represents a significant leap forward in air sampling technology. Incorporating the latest technological breakthroughs in particle collection, the portable and hand-held unit captures airborne pathogens and spores into a small, concentrated liquid sample. The features of the BioCapture® 650 provide the user with an effective and easy to use instrument for efficient collection of biological agents.

Key Features

- Collects Anthrax, Plague and other bio-terrorism diseases
- 100% decontamination ability
- Highly operable in sand, dust and inclement environments
- Single button operation in hotzone
- Flexible sampling times
- Disposable collector cartridge eliminates cross-contamination
- Easy to operate by user in fully dressed Level A or MOPP-IV gear



Specifications

Size:	7" x 6" x 14"
Weight:	7.5 lbs
Operating Flow Rate:	200 LPM
Particle Collection Size:	0.5 – 10 microns
Liquid Sample Volume:	5 mL
Sampling Times:	5, 15, 30, 60 minutes
Battery:	Lithium Ion 2-hour run time
Electrical:	12 VDC 26 Watts
Operating Angle:	0° (horizontal) to 20°

Environmental Performance

Operating Temperature:	+2°C (+35°F) to +54°C (+130°F)
Storage Temperature:	-46°C (-51°F) to +71°C (+160°F)
Shock/Drop:	36" drop on all faces and edges
Operating Vibration:	5-55 Hz: 0.7g at 5-15Hz; 1.2g at 16-25 Hz; 3g at 26-55 Hz
Operating Humidity:	5% to 95% non-condensing
Operating Altitude:	15,000 ft
Rain:	Water Tightness; 1.8" per hour in 20 mph wind for 30 minutes
Fungus:	Materials do not support growth
Salt Fog:	Materials certified not to corrode

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