RAZOR™ EX BioDetection System

Complete Field-deployable Solution

The advanced RAZOR EX system employs Real-time PCR technology to deliver the most reliable and sensitive detection and identification of biological pathogens in the field. Designed specifically for field use, the compact and lightweight design of the RAZOR EX allows it to be hand carried and minimal sample preparation requirements make it easy to use. Used with The 10® Target Screen Kit, the RAZOR EX simultaneously tests ten pathogens with reliable, DNA-based results available in less than 30 minutes. Developed for first responders and front line military troops, it is easily operated while working in protective equipment under extreme conditions. The new battery powered instrument includes Bluetooth® capabilities, bar code reader, and a bright, easy-to-read color screen.

The RAZOR EX utilizes BioFire Diagnostics’ patented reagent pouch system—integrated freeze-dried reagents packaged in durable plastic pouches for incomparable ease of use. A variety of pre-formatted pouch configurations are available for biothreat, food testing, water testing, or environmental testing applications.

The Following Tests are Available for These Markets:

<table>
<thead>
<tr>
<th>BioThreat</th>
<th>Food Testing</th>
<th>Water Testing</th>
<th>Environmental</th>
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<tbody>
<tr>
<td>Anthrax</td>
<td>Listeria</td>
<td>Cryptosporidium</td>
<td>Coxiella</td>
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<tr>
<td>Ricin</td>
<td>Salmonella</td>
<td>Salmonella</td>
<td>Botulism</td>
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<tr>
<td>Smallpox</td>
<td>Campylobacter</td>
<td>E. coli 0157</td>
<td>Brucella</td>
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<tr>
<td>Plague</td>
<td></td>
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<td>Tularemia</td>
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- Reliable: Less than 1% error rate.
- Sensitive: Detection limit as low as 100 cfu/ml.
- Specific: Less than 1% false positive error rate.
- Fast: Results in less than 30 minutes.
- Field Portable: weighs 11 lbs (4.9kg), battery powered.
- Validated Technology: same PCR technology used in central labs.
- Used world-wide by Military, Hazmat, and First Responders.

CBRN Detection
Quickly assess white powder threats for harmful biological pathogens. The RAZOR EX tests for 10 Category A and B BioTerrorism agents.
RAZOR EX Instrument
The compact unit comes loaded in a durable Pelican case with the instrument, battery, and recharger. The system is 110/220V compatible and has passed rigorous environmental testing. It was designed to operate as a stand-alone unit (without PC).
- Automatic analysis (Yes/No answer)
- Battery powered—Rechargeable (B runs/charge)
- Hot swappable power
- Large built-in color display shows real-time fluorescent tracings
- Wireless or USB connectivity
- Weighs 11 lbs.

User Interface
Internal calibration and diagnostics ensure the instrument is functioning within tolerances before and during operation. Automatic analysis software runs “on-the-fly,” with raw data and software analysis presented simultaneously.
- Designed for use in personal protective equipment
- Large intuitive push-buttons
- Bright color screen
- Bar code reader for protocol and pouch information uploads
- Screen prompts provide operational protocol guidance

Software
The software is an additional tool to expand the stand-alone RAZOR EX capabilities to aid in post-mission support.
Software features include:
- After incident data analysis
- Data archiving
- Printable reports

Training
The system comes with a training DVD containing all the necessary multimedia tools for sampling, pouch loading, machine operation, maintenance, and software. On-site training is available by special arrangement.

To learn more about how the RAZOR EX can benefit your program as well as provide a reliable method for testing pathogens, visit BioFire Diagnostics at www.biofiredx.com/BioDefense or call 1-800-735-6544

Ordering Information
<table>
<thead>
<tr>
<th>Catalog No</th>
<th>Instrument Options</th>
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<tbody>
<tr>
<td>RAZRASY-4000</td>
<td>690 Filter Set (HP, Commercial Reagents)</td>
</tr>
<tr>
<td>RAZRASY-4001</td>
<td>510 Filter Set (TQ, Hydrolysis Probe Reagents)</td>
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Instrument Specifications

<table>
<thead>
<tr>
<th>Sample Description</th>
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<tr>
<td>12 reaction per sample pouch containing freeze-dried reagents. Positive and negative controls are included with each pouch.</td>
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</table>

Fluorescence Acquisition
- One color optics module
- Excitation wavelengths 470 ± 20 nm
- Emission wavelengths 530 ± 10 nm—TaqMan®
- Emission wavelengths 690 ± 60 nm—HybProbe®

Power Supply
- Rechargeable battery pack (included with instrument)
- External Power Supply: 24 V DC, 4 A Output, 110–220 V AC input

Instrument Dimensions and Weight (w x d x h)
- Size: 25.4 x 11.4 x 19 cm (10 x 4.5 x 7.5 in.)
- Weight: 4.9 kg (11 lb.) including battery

Performance Parameters
- Instrument set-up time ≤ 5 min.
- Sample run time ≤ 30 minutes (average)

Temperature Control
- Lower Heater: 56 °C to 64 °C/Upper Heater: 86 °C to 94 °C
- Accuracy: ± 1.0 °C from target temperature
- Uniformity: 0.5 °C in a single sample—Intersample 1.0 °C across sample area—Intersample
- Operating: 0 °C to 40 °C
- Storage: -33 °C to 70 °C

Desktop Software
- Windows® XP Software Application
- Download data for offline analysis
- Intuitive navigation
- After action reports

Instrument Certifications
- CE Mark
- Manufactured under cGMP

Parts List
The following items are included with the instrument

Instrument

Tool Kit
- 5 1/2” Needle Nose Pliers, Lens Cleaning Solution, Lens Cleaning Tissue

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