GenPrime, Inc. - Prime Alert Biodetection System

GENERAL DESCRIPTION:

The Prime Alert Biodetection/ Threat Verification System is designed to allow First Responders to perform a rapid, on-site test to determine if a substance is a potential biohazard or merely a hoax. The simple and reliable technology alerts the responder to the presence of suspicious levels of any microbe in one five-minute test. A negative result is quickly followed by tests for ricin and botulinum toxins. In less than 15 minutes reliable information is obtained, allowing the First Response team to make an informed decision regarding incident closure. The Microbe Screen™ is performed using a proven fluorescent-based technology in a hand-held reader and the Toxin Screen™ is carried out using lateral flow antibody tests.

TECHNICAL DESCRIPTION:

The Prime Alert is a broad spectrum point detection device designed for screening unknown substances for the presence of microbes. It employs a fluorescent nucleic acid stain with high affinity binding to DNA/RNA. The amount of fluorescence in a sample is correlative to the CFU's, and is reported digitally on a handheld battery powered fluorometer. This value is used to make a qualitative assessment of the presence or absence of microbes in a sample.

CONTACT INFORMATION

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Americas

COST

- $10,500/system
- $210/analysis

Tier Selection

Final tier assignment is based on overall product score.

Top Tier | Second Tier | Third Tier | Fourth Tier | Bottom Tier

RANKINGS

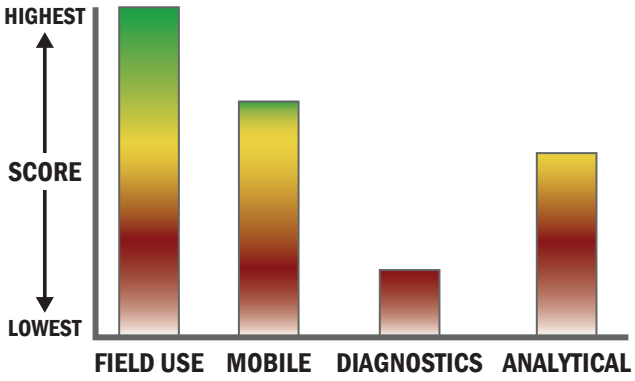
	Biological	Chemical	Radiological
FIELD USE System	Second Tier	N/A	N/A
MOBILE Laboratory	Third Tier	N/A	N/A
DIAGNOSTIC Laboratory	Bottom Tier	N/A	N/A
ANALYTICAL Laboratory	Fourth Tier	N/A	N/A

Survey Source

Vendor Supplied Information

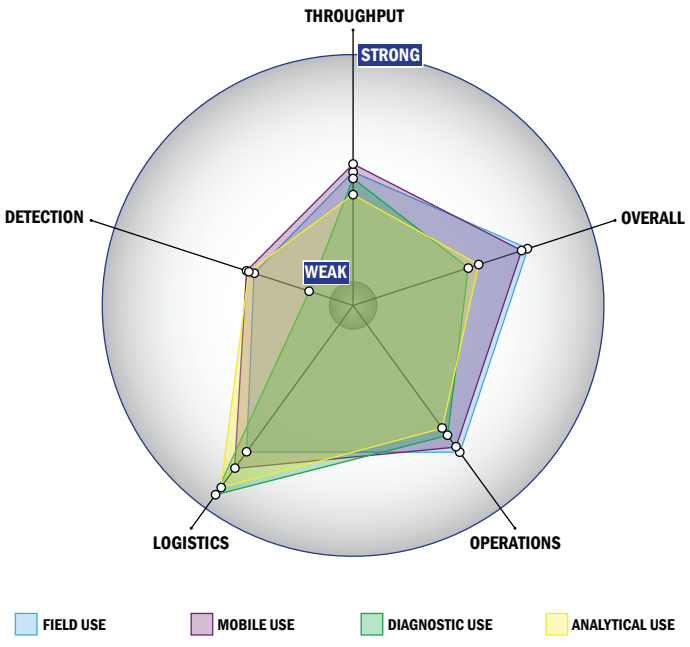
Scoring Analysis

System scores are compared across the four scenarios and ranked from highest to lowest.



Impact Chart

The Impact Chart is a spider graph representing specific categories and designed to give the reader a visual depiction of how a particular system is expected to operate across the four different scenarios. The score for each of the seven categories is presented as the percentage of the total possible score. Higher category scores extend the spokes of a graphic toward the outer edge of the chart. The area graphed for each of the four scenarios relates to how well the system performed in that scenario. Graphics for each of the four scenarios are super-imposed for ease of comparison.



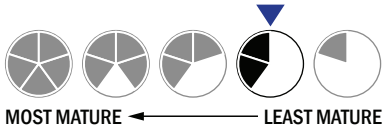
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- 1 sample, <10 tests/sample per run
- 95-32 samples every 2 hours
- The system could be adapted to a semi-automated system with some effort
- Device or system is intended for multiple detection assays
- 3 solutions, buffer, eluents, and/or reagents
- 3 components
- Less than 5 minutes is required for set-up
- 3-5 steps are required for detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Between 1 and 5 kg
- Wired connections are available
- System or device uses batteries
- 4-8 hours battery life



Operations:

- Can be used from < -21°C to > 42°C (All temperatures)
- Components must be stored at room temperature (27°C)
- Performance is not influenced by relative humidity
- Between 1 to 3 years shelf life
- Results can be viewed in real-time
- The system is not capable of autonomy
- The system software is closed and not available for modification
- The system hardware is closed and not available for modification

Detection:

- This system does not test liquids
- Excellent specificity. System has occasional false alarms under certain conditions (<2%)
- Greater than 100,000 CFU per mL
- Greater than 100,000 PFU per mL
- 100-1,000 ng per mL
- Spore lysis not necessary for detection by system