Veritide - Ceeker

GENERAL DESCRIPTION:

Designed for first responders, the Veritide Ceeker is a portable, hand-held biological spore detector that is one-button simple, requires no special training, requires 10 minutes for the analysis, gives a simple yes or no answer, does not destroy the sample and is fully decontaminable. There are no reagents or wet chemistry involved.

TECHNICAL DESCRIPTION:

The Veritide optical detection platform employs non-invasive and non-contact optical methods to detect and identify biological particles. Specially tailored light is used to optically probe the particles and their unique fluorescence signatures are recorded, using a photomultiplier tube (PMT) and optical filters. The sample is exposed to shorter ultraviolet wavelengths that photolyze the dipicolinic acid (pyridine--2,6--dicarboxylic acid) (DPA), unique to bacterial spores, to picolinic acid (pyridine carboxylic acid). The fluorescence signature is again measured. The absolute as well as the difference optical signatures are then carefully analyzed using proprietary optical recognition protocols.

CONTACT INFORMATION

Veritide
1610 7th Ave. NE
Jacksonville, AL 36265
POC: Lou Reinisch

COST

- $25,000/system
- $1/analysis

Tier Selection

Final tier assignment is based on overall product score.

Top Tier Second Tier Third Tier Fourth Tier Bottom Tier

RANKINGS

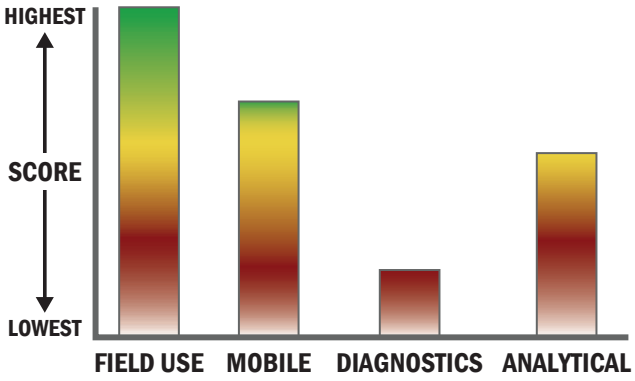
	Biological	Chemical	Radiological
FIELD USE System	Second Tier	N/A	N/A
MOBILE Laboratory	Second Tier	N/A	N/A
DIAGNOSTIC Laboratory	Bottom Tier	N/A	N/A
ANALYTICAL Laboratory	Fourth Tier	N/A	N/A

Survey Source

Vendor Supplied Information

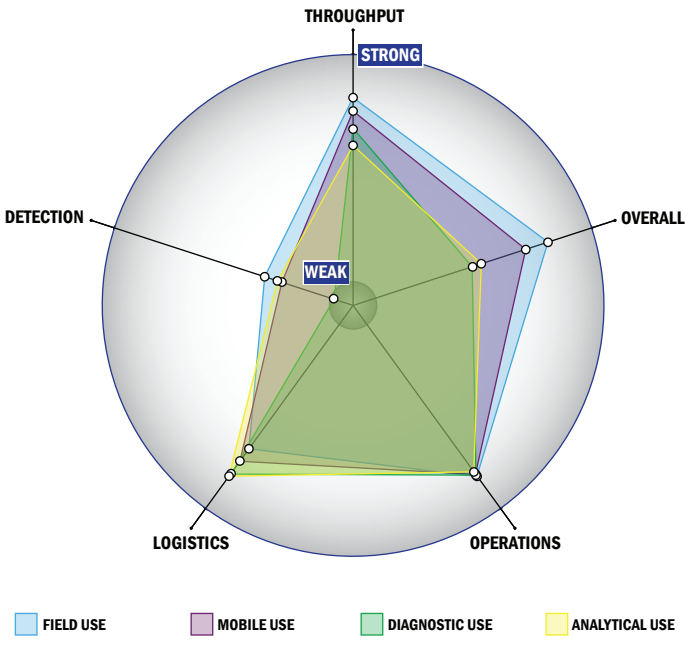
Scoring Analysis

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.



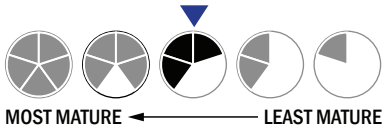
Evaluation Criteria

Throughput:

- Between 2 and 15 minutes for detection
- Multiple samples, single tests/sample per run
- Less than 32 samples every 2 hours
- The system or device is currently semi-automated
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- 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
- Approximately the size of a toaster
- Between 1 and 5 kg
- System or device uses batteries
- 1-2 hours battery life



Operations:

- Can be used from 4°C to 41°C
- Performance is not influenced by relative humidity
- Greater than 3 years shelf life
- 5-10 years expected life
- Results can be viewed in real-time
- The system could easily be adapted into a fully autonomous system
- The system software is closed and not available for modification
- The system hardware is closed and not available for modification

Detection:

- Less than 10 µL
- Superior specificity. System has a false alarm rate approaching zero (~0%)
- 100-1,000 CFU per mL
- Spore lysis not necessary for detection by system