Smiths Detection - RadSeeker - Handheld Radioisotope Identifier

GENERAL DESCRIPTION:

The RadSeeker is a hand-held, portable, rugged and highly accurate radioisotope detector and identifier. The RadSeeker was specifically designed to meet the Department of Homeland Security (DHS) mission requirements for a next-generation system capable of detecting and identifying nuclear threat materials. The RadSeeker offers superior identification capabilities that are based on Symetrica's Discovery Technology™. This sophisticated detector system is capable of resolving complex masking scenarios and exceeds all ANSI N42.34 (2006) requirements for the identification of bare, shielded and multiple isotopes. The RadSeeker is easy to use while supplying the operator with quick, simple, specific information for threat assessment. Applications include Customs inspection, border protection, emergency response, and radiological facilities/ personnel monitoring.

TECHNICAL DESCRIPTION:

The RadSeeker offers superior identification capabilities that are based on Symetrica's Discovery Technology™. This technology couples advanced spectrum processing and identification algorithms with a choice of highly sensitive 1.5" x 1.5" Lanthanum Bromide (LaBr3) or 2" x 2" Sodium Iodide (NaI) detectors resulting in superior accuracy which is unique and exclusive to Smiths Detection. This sophisticated detector system is capable of resolving complex masking scenarios.

CONTACT INFORMATION

Smiths Detection
21 Commerce Dr.
Danbury, CT 06810 USA
POC: Stephanie Mirabelli - Product Manager
stephanie.mirabelli@smithsdetection.com
www.smithsdetection.com

COST

N/A

Tier Selection

Final tier assignment is based on overall product score.

Top Tier Second Tier Third Tier Fourth Tier Bottom Tier

RANKINGS

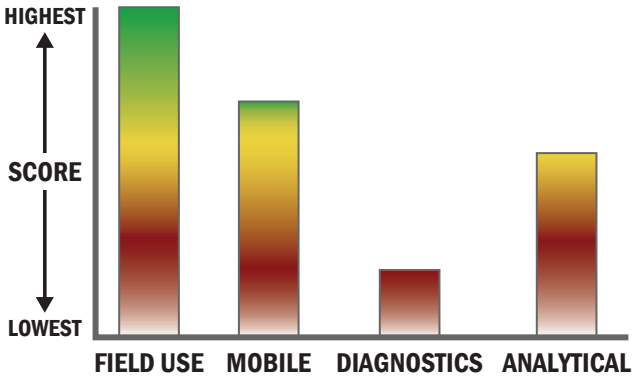
	Biological	Chemical	Radiological
FIELD USE System	N/A	N/A	Top Tier
MOBILE Laboratory	N/A	N/A	Top Tier
DIAGNOSTIC Laboratory	N/A	N/A	Top Tier
ANALYTICAL Laboratory	N/A	N/A	Top Tier

Survey Source

Vendor Supplied Information

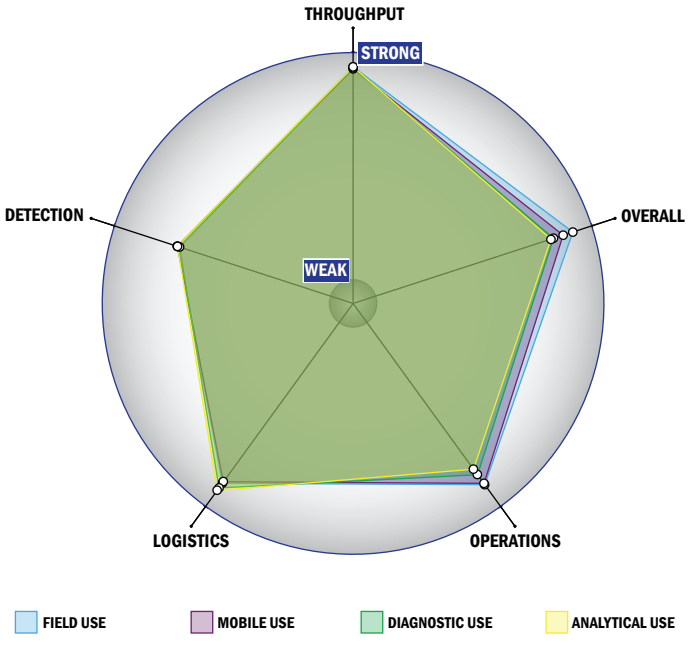
Scoring Analysis

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.



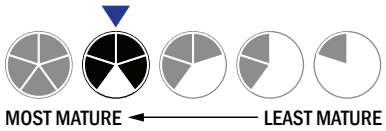
Evaluation Criteria

Throughput:

- Detection is instantaneous
- Continuous operation with no defined runs
- System is continuous and provides real time analysis with no defined tests/samples
- 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
- 0 components
- Less than 5 minutes is required for set-up
- Automatic detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a toaster
- Between 1 and 5 kg
- Satellite, wireless and 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)
- Device or system has peak performance at normal relative humidity conditions
- Greater than 10 years expected life
- Results can be viewed in real-time
- The system or device is currently fully autonomous
- The system software is closed and not available for modification
- The system hardware is closed and not available for modification

Detection:

- Excellent specificity. System has occasional false alarms under certain conditions (<2%)
- Total dose, dose rate and count rate with simultaneous display readout and automatic differentiation between types of radiation detected
- Display indicates 0 until more than 1 mR/hr is detected for dose rate
- Down to background level radiation for count rate
- System is used for surveying