

RAE Systems - NeutronRAE II



GENERAL DESCRIPTION:

NeutronRAE II is a radiation detector to provide rapid detection of both gamma and neutron radiations. It was designed specifically to meet the needs of first responders.

TECHNICAL DESCRIPTION:

It uses a CsI scintillation detector for gamma detection and a Lil scintillator for neutron detection.



CONTACT INFORMATION

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COST

- \$2,200/system
- N/A/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	N/A	N/A	Bottom Tier
MOBILE Laboratory	N/A	N/A	Fourth Tier
DIAGNOSTIC Laboratory	N/A	N/A	Bottom Tier
ANALYTICAL Laboratory	N/A	N/A	Bottom Tier

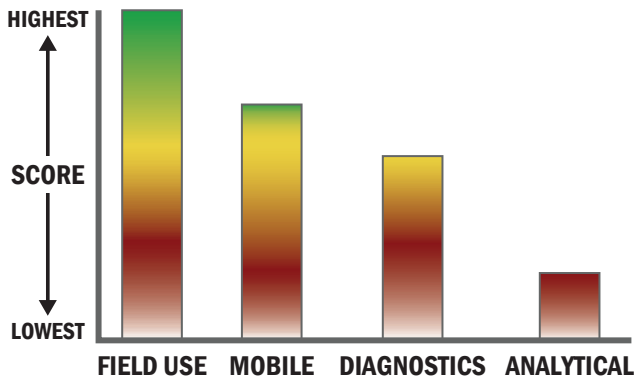
Survey Source

Vendor and Internet Supplied Information



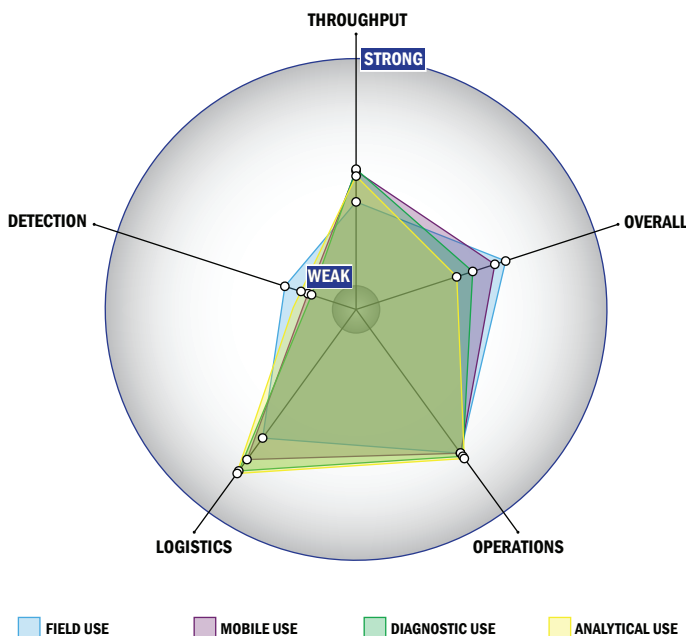
Scoring Analysis

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.



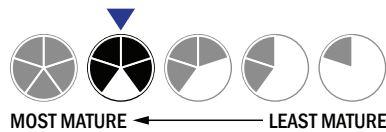
Evaluation Criteria

Throughput:

- System is continuous and provides real time analysis with no defined tests/samples
- The system or device is currently fully automated
- Device or system is intended for multiple detection assays
- No set-up of the system is required
- 1-2 steps are required for detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a soda can
- Less than 1 kg
- Wireless and wired connections are available
- System or device uses batteries



Operations:

- Components must be stored at room temperature (27 °C)
- Performance is not influenced by relative humidity
- Between 1 to 3 years shelf life
- 1-3 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:

- This system does not test liquids
- Superior specificity. System has a false alarm rate approaching zero (~0%)
- Total dose, dose rate and count rate with operator selection to show the display, may differentiate between types of radiation
- System is used for personnel detection