



Technical Associates - Radiation Control Monitor

GENERAL DESCRIPTION:

The Radiation Control Monitor can be tailored to at least 50 configurations meeting a variety of objectives in monitoring radioactivity including:

- Exit/doorway monitor
- Package/mail monitor
- Vehicle monitor
- Laundry monitor

To maintain control of radioactive materials it is absolutely essential to control and to know when and where radioactivity is entering or leaving the area where it is used. The Radiation Control Monitor consists of:

- Multi-channel systems
- Highly sensitive (50 detector models)
- Alarms with detection of radiation
- Relay control can lock doors and trigger a Siren or autodialer or e-mail

Two of the many radiation control monitor systems are high sensitivity monitors which are easily placed at entrance and exits and other strategic locations.

TECHNICAL DESCRIPTION:

The Radiation Control Monitor includes:

- Engineering Units: User can input correct conversion factor and change to any units.
- Controls: Front Panel: On-Off, Alarm-mute, Rate, Integrate, Reset.
- Recessed or Internal: Discriminator level, high voltage.
- Detectors: Any GM or alpha, beta, gamma or neutron scintillator. Over 50 probes and sample detectors to choose from.
- Input Sensitivity: Adjustable from less than 1 millivolt to 100 millivolt
- Anti-saturation and Dead-time Corrections are available.
- Power: 105-125 volts, 50-60 Hz (220 V optional)



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	◐
MOBILE Laboratory	N/A	N/A	○
DIAGNOSTIC Laboratory	N/A	N/A	○
ANALYTICAL Laboratory	N/A	N/A	◐

CONTACT INFORMATION

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COST

- \$9,500-\$60,000/system
- \$0/analysis

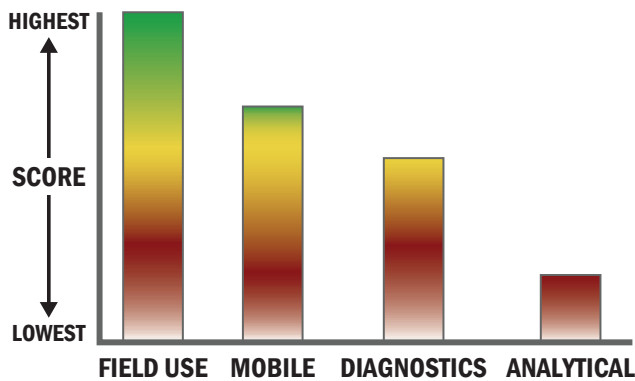
Survey Source

Vendor and Internet Supplied Information



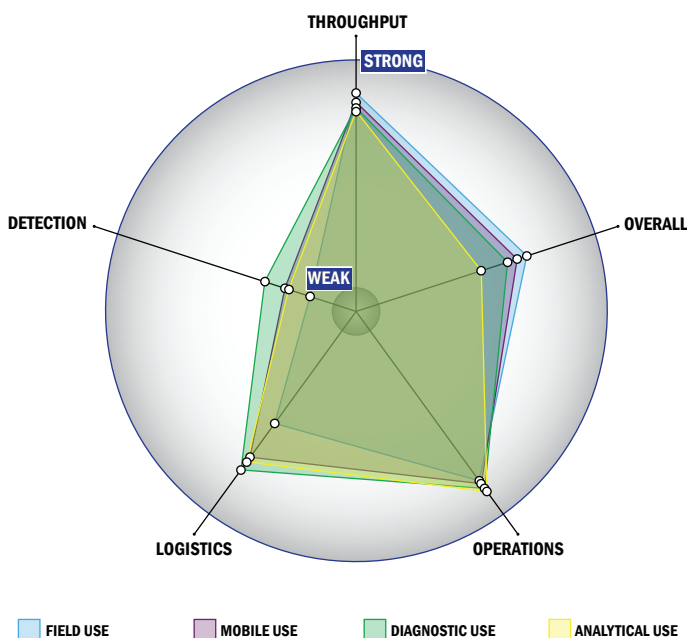
Scoring Analysis

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.



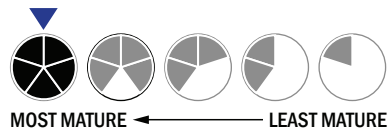
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- 1 sample, <10 tests/sample per run
- 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
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- Less than 5 minutes is required for set-up
- 1-2 steps are required for detection

Logistics:

- An afternoon of training and some technical skills required
- Approximately the size of a carry-on luggage suitcase
- Between 5 and 25 kg
- Wired connections are available
- System or device has 110V electrical requirement



Operations:

- Can be used from 4 °C to 41 °C
- Components must be stored at room temperature (27 °C)
- Performance is not influenced by relative humidity
- Greater than 3 years shelf life
- 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:

- This system does not test liquids
- System is used for area air sampling