

RADeCO, Inc. - Tru-Dac



GENERAL DESCRIPTION:

Tru-Dac is a personal Alarming Alpha/Beta Monitor. Detects airborne radiation for inhalation dose in an ultra-portable package. The device can be used for either First Responders or Laboratory use. Utilizes a membrane filter. Collected airborne activity is analyzed by internal detector with Alpha spectroscopy and gross Beta counting.

TECHNICAL DESCRIPTION:

Aerosol is collected at the surface of a filter. A semiconductor detector is used to Detect Alpha & Beta particles. Separation of long living Alpha Nuclides from Radon daughters by using alpha-spectroscopy. Beta gross counting and natural background subtraction is also included in the detection system.



CONTACT INFORMATION

RADeCO, Inc.
17 West PKWY
Plainfield, CT 06374

COST

- \$5,750/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

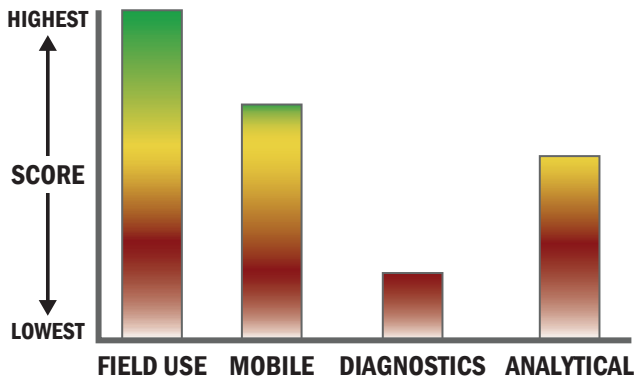
	Biological	Chemical	Radiological
FIELD USE System	N/A	N/A	●
MOBILE Laboratory	N/A	N/A	●
DIAGNOSTIC Laboratory	N/A	N/A	●
ANALYTICAL Laboratory	N/A	N/A	●

Survey Source

Vendor Supplied Information

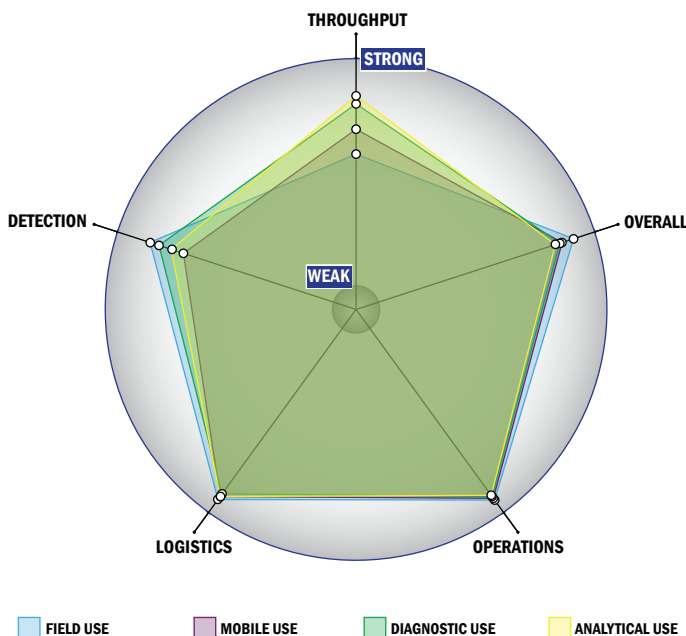
Scoring Analysis

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.



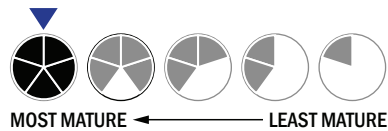
Evaluation Criteria

Throughput:

- 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
- 1 component
- Less than 5 minutes is required for set-up
- 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
- 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)
- Components must be stored at room temperature (27°C)
- Performance is not influenced by relative humidity
- 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 open but modification requires licensing
- The system hardware is open but modification requires licensing

Detection:

- This system does not test liquids
- Superior specificity. System has a false alarm rate approaching zero ($\sim 0\%$)
- Only total dose and count rate
- Down to background level radiation for dose rate
- Down to background level radiation for count rate
- System is used for personnel detection