Technical Associates - Nanosecond X-Ray Detector

GENERAL DESCRIPTION:

The Nanosecond X-Ray Detector will accurately measure the integrated total dose from pulsed x-ray machines over a wide range of pulse widths and repetition rates. This monitor also measures low energies and short pulses that other survey meters ignore to the detriment of worker health. Digital readout: 6 digit-rate, 8 digits integrate dose rate and total dose read out, flat response. Sealed air ion chamber sees axially below 5 KeV gamma or x-ray. Detects beta, gamma, x-ray, positrons with a fast response and wide range. Especially useful in Non-Destructive Testing or other Industrial or Medical applications where pulsed x-rays are used. End Users: US Military, Hospitals, Aircraft and Other Manufacturing.

TECHNICAL DESCRIPTION:

The Nanosecond X-Ray Detector consists of a 2" diameter air ion chamber coupled to a stable solid state MOSFET input electrometer with built in A to D converter to read out directly in mR/h or total mR. Rate range is 0.01 R/h to 100 R/h in a single range. Dose range is 0.001R - 100R in a single range. Other Ranges are also available. Options include: Other Rate or Integrated Ranges; Other Readout Units such as Si units: Sv and Sv/h.

CONTACT INFORMATION

Technical Associates
7051 Eton Ave.
Canoga Park, CA 91303
POC: Robert Goldstein, President
818-883-7043
tagold@nwc.net
www.tech-associates.com

COST

- $3,500/system
- $0/analysis

Tier Selection

Final tier assignment is based on overall product score.

Top Tier | Second Tier | Third Tier | Fourth Tier | Bottom Tier

RANKINGS

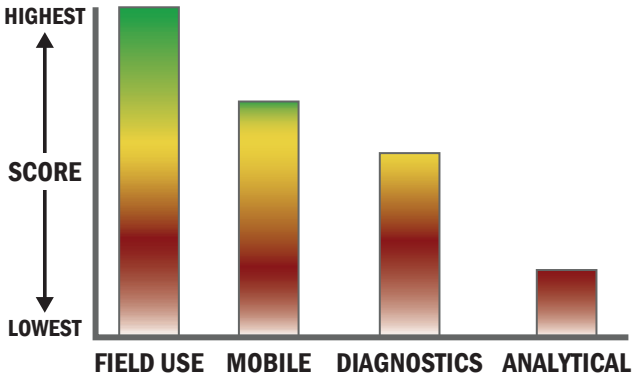
	Biological	Chemical	Radiological
FIELD USE System	N/A	N/A	Top Tier
MOBILE Laboratory	N/A	N/A	Bottom Tier
DIAGNOSTIC Laboratory	N/A	N/A	Bottom Tier
ANALYTICAL Laboratory	N/A	N/A	Bottom Tier

Survey Source

Vendor and Internet Supplied Information

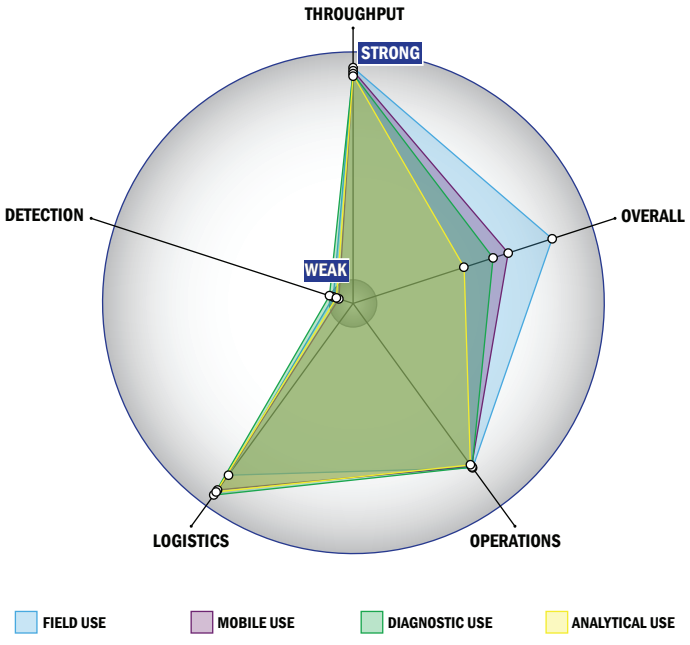
Scoring Analysis

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.



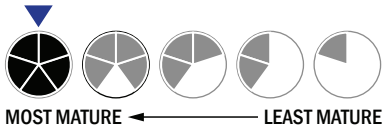
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- Continuous operation with no defined runs
- System is continuous and provides real time analysis with no defined tests/samples
- The system could easily be adapted into a fully automated system
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- 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
- Between 1 and 5 kg
- Wired connections are available
- System or device uses batteries
- 4-8 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
- Greater than 10 years expected life
- Results can be viewed in real-time
- The system is not capable of autonomy
- The system does not employ any software
- The system hardware is closed and not available for modification

Detection:

- Possible the system could receive 510K clearance, no current efforts at this time
- Possible the system could receive FDA approval, no current efforts at this time
- This system does not test liquids
- System is used for surveying