Technical Associates - Hydrofracking Radiation Portable Water Monitor

GENERAL DESCRIPTION:

Hydrofracking releases trapped radiation from underground formations into mobile water flow, including groundwater, or industry generated wastewater, sludge, or brine and surrounding soil.

The Hydrofracking Radiation Portable Water Monitor, Meda-SP, is a small light weight field monitor for on the spot measurement of water or soil samples.

Quick detection of radiation contamination in water and soil generated by the hydrofracking process:

- Alpha, Beta, and Gamma emitters; Uranium, Radium, Potassium, and Thorium in water samples
- Hydrofracking wastewater, sludge and brine; Roadside Chemical Spill; Industrial Accident; Improper Dumping of Industrial Waste.
- Easy detection of surface contamination-alpha, beta, gamma; hands, boots, clothing and equipment
- Identify personnel needing decontamination

End Users: Oil and Gs Industry, First Responders, state and federal health agencies, citizen groups, municipal utilities.

TECHNICAL DESCRIPTION:

The Hydrofracking Radiation Portable Water Monitor features an internally mounted 2 inch pancake GM detector with window looking downward from bottom of case and an external crystal scintillation probe for detection of low energy gammas. Alpha, beta, and gamma emitters are detected. A sliding shield protects pancake detector when not in use. This system is half the weight of other systems. Submersible sensor probes for reservoir, stream or sump provide additional diversity.

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	Second 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

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

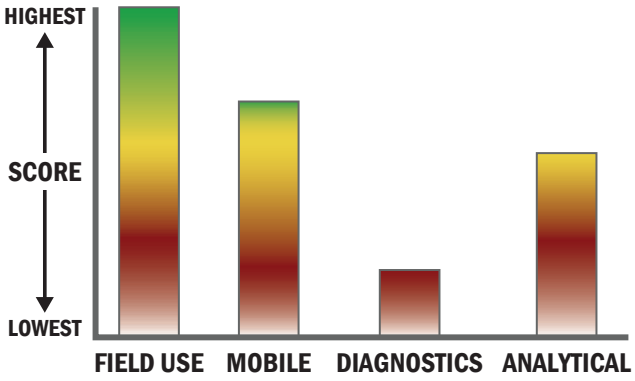
- $3,720/system
- <$1/analysis

Survey Source

Vendor Supplied Information

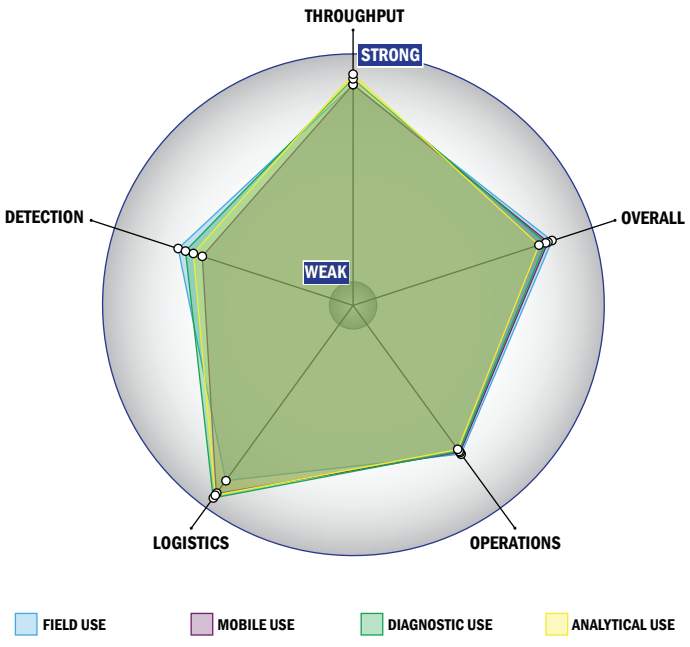
Scoring Analysis

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.



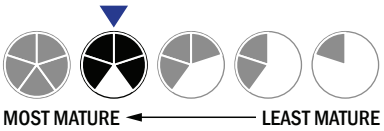
Evaluation Criteria

Throughput:

- 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 or device is currently semi-automated
- 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 for set-up
- 3-5 steps are required for detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a toaster
- Less than 1 kg
- Wired connections are available
- System or device uses batteries
- 4-8 hours battery life



Operations:

- Can be used from 4 °C to 37 °C
- Performance is not influenced by relative humidity
- Greater than 10 years expected life
- Results can be viewed in real-time
- The system or device is currently fully autonomous
- The system does not employ any software
- The system hardware is open and available for modification

Detection:

- Greater than 250 µL
- Excellent specificity. System has occasional false alarms under certain conditions (<2%)
- Only total dose and dose rate
- Down to background level radiation for dose rate
- System is used for surveying