

# Technical Associates - Hydrofracking Radon Portable Air and Gas Monitor



## GENERAL DESCRIPTION:

Radon gas is a common problem especially in closed places. Hydrofracking releases Radon gas which then works its way to the soil surface and then into basements and buildings. Additionally Radon gas finds its way into the gas pipeline. These avenues of escaping Radon gas cause hazardous conditions for people and animals. The need for testing has increased with the advent of hydrofracking technology. The Hydrofracking Radon Portable Air & Gas Monitor, PTG-9-RN, is a sensitive rugged, portable instrument for quick and immediate detection and measurement of airborne Radon.



End Users: Oil and Gas Industry, Building Inspectors, state and federal health agencies, small labs, citizen groups, municipal utilities.

## TECHNICAL DESCRIPTION:

The Hydrofracking Radon Portable Air & Gas Monitor utilizes a subtractive balanced chamber electro - meter circuit decreasing background effects to negligible levels. Its ionized and filtered intake reduces to negligible levels spurious effects from smoke, dust and existing ionization in the air. Inlet and outlet hoses allow monitoring interiors of fume hoods, exhaust stacks, etc. The PTG-9-A-RN will measure airborne radon as free Radon gas (with or without Radon Daughters at users option) as low as 1 pCi/l.

## CONTACT INFORMATION

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## COST

- \$9,211/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

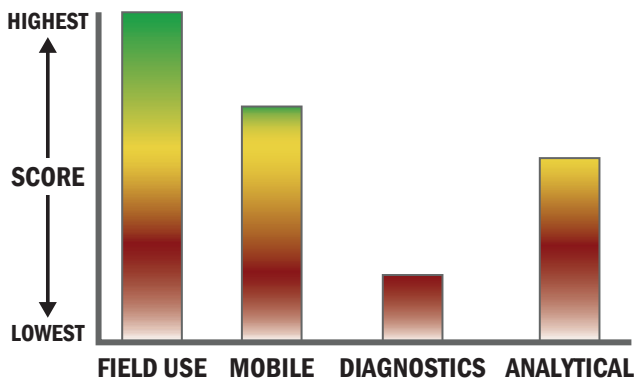
	Biological	Chemical	Radiological
<b>FIELD USE System</b>	N/A	N/A	●
<b>MOBILE Laboratory</b>	N/A	N/A	●
<b>DIAGNOSTIC Laboratory</b>	N/A	N/A	●
<b>ANALYTICAL Laboratory</b>	N/A	N/A	●

## Survey Source

Vendor Supplied Information

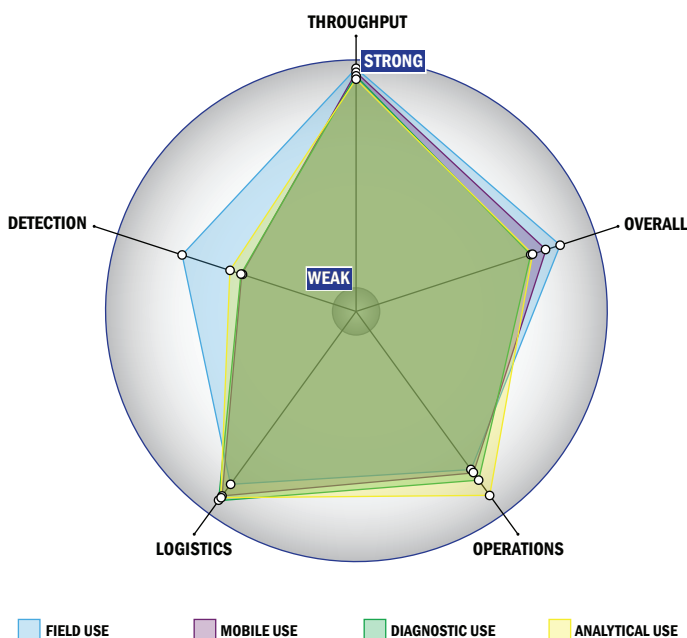
## Scoring Analysis

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.



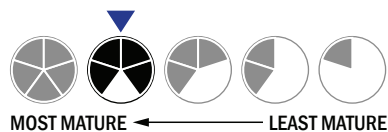
## Evaluation Criteria

### Throughput:

- 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
- 0 components
- No set-up of the system is required for set-up
- Automatic detection

### Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a carry-on luggage suitcase
- Between 1 and 5 kg
- Satellite and 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 10 years expected life
- Results can be viewed in real-time
- The system or device is currently fully autonomous
- The system software is open and available for modification
- The system hardware is open and available for modification

### Detection:

- This system does not test liquids
- 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 area air sampling

