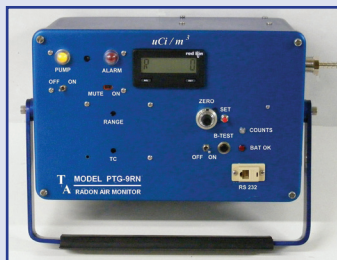


Technical Associates - Carbon14 Air Monitor



GENERAL DESCRIPTION:

The Carbon14 Air Monitor is a sensitive, rugged, and portable instrument for detection and measurement of airborne C14. It is line operated with nominal 20 hour battery back-up. Optional inlet and outlet hoses allow monitoring interiors of fume hoods, exhaust stacks, etc. Features include: user settable units - uCi/l or bq/m3 etc; wide range - digital accuracy; programmable digital readout; sensitive for occupational exposure dynamic background compensation; battery operation or ac operation; built-in high level alarm; built-in low flow alarm; built-in RS-232 computer interface. End Users: nuclear power plants, coal fired power plants, pharmaceutical labs, universities.



TECHNICAL DESCRIPTION:

The Carbon14 Air Monitor subtractive balanced chamber electrometer circuit decreases background effects to negligible levels and its deionized and filtered intake minimizes spurious effects from smoke, dust and existing ionization in the air. It will measure airborne C14 as CO2 gas or as volatile chemicals in concentrations as low as 1×10^{-4} uCi/l of air (3.7KBq/m³). Electrometer circuit amplifies net difference between 0.7 liter tritium internal chamber and sealed background chamber of similar configuration. Battery Check, Set (calibration aid), Zero Adjust, Meter Programming. Internal or external calibration options.

CONTACT INFORMATION

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 Canoga Park, CA 91303
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 818-883-7043
 www.tech-associates.com

COST

- \$7,950/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	
MOBILE Laboratory	N/A	N/A	
DIAGNOSTIC Laboratory	N/A	N/A	
ANALYTICAL Laboratory	N/A	N/A	

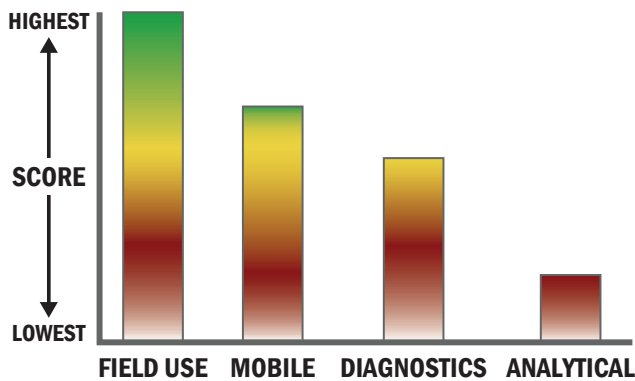
Survey Source

Internet Supplied Information



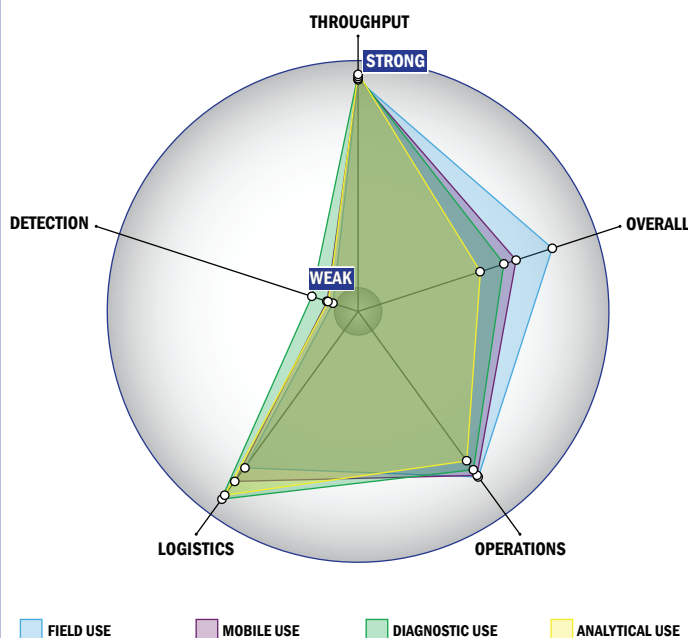
Scoring Analysis

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.



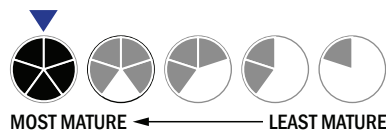
Evaluation Criteria

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 every 2 hours
- 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:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a toaster
- Between 5 and 25 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 or device is currently fully autonomous
- The system does not employ any software
- The system hardware is open and 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 area air sampling