Pajarito Scientific Corporation - TechniCART

GENERAL DESCRIPTION:

The TechniCART™ has been engineered to allow rapid and easy transportation of an entire portable nondestructive assay (NDA) system, e.g. a High Purity Germanium (HPGe) detector, shield and collimator together with laptop and acquisition electronics. The flat-free large caster wheels permit movement through grass, dirt and gravel type terrain. The TechniCART™ also allows the detector to be positioned at different angles, from vertically downward to vertically upward. The design of the system results in a multi-use platform that is mobile, adaptable, rugged and ergonomically efficient. The TechniCART™ has a light-weight aluminum frame that accommodates 200 lbs of equipment. An extension arm can be supplied that allows a vertical reach of 96 inches. An outrigger arm provides additional stability for extended heights.

TECHNICAL DESCRIPTION:

One of the uses of the TechniCART™ is to allow first responders to rapidly deploy a non-destructive assay system at a selected location to identify and quantify radioactive material. The flat-free large caster wheels permit movement through grass, dirt and gravel type terrain. The TechniCART™ also allows the detector to be positioned at different angles, from vertically downward to vertically upward. The design of the system results in a multi-use platform that is mobile, adaptable, rugged and ergonomically efficient. The TechniCART™ has a light-weight aluminum frame that accommodates 200 lbs of equipment. An extension arm can be supplied that allows a vertical reach of 96 inches. An outrigger arm provides additional stability for extended heights.

CONTACT INFORMATION

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COST

N/A

Tier Selection

Final tier assignment is based on overall product score.

Top Tier Second Tier Third Tier Fourth Tier Bottom Tier

RANKINGS

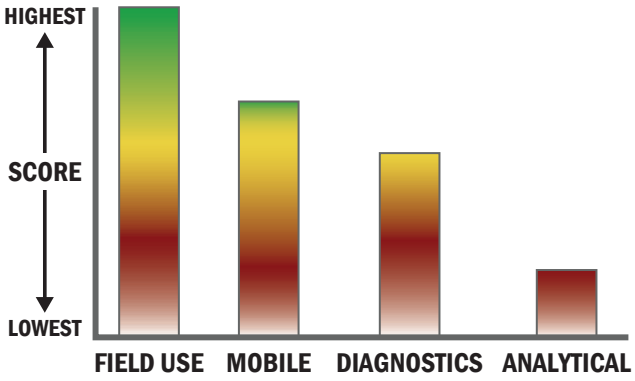
	Biological	Chemical	Radiological
FIELD USE System	N/A	N/A	Bottom Tier
MOBILE Laboratory	N/A	N/A	Bottom Tier
DIAGNOSTIC Laboratory	N/A	N/A	Bottom Tier
ANALYTICAL Laboratory	N/A	N/A	Bottom Tier

Survey Source

Vendor Supplied Information

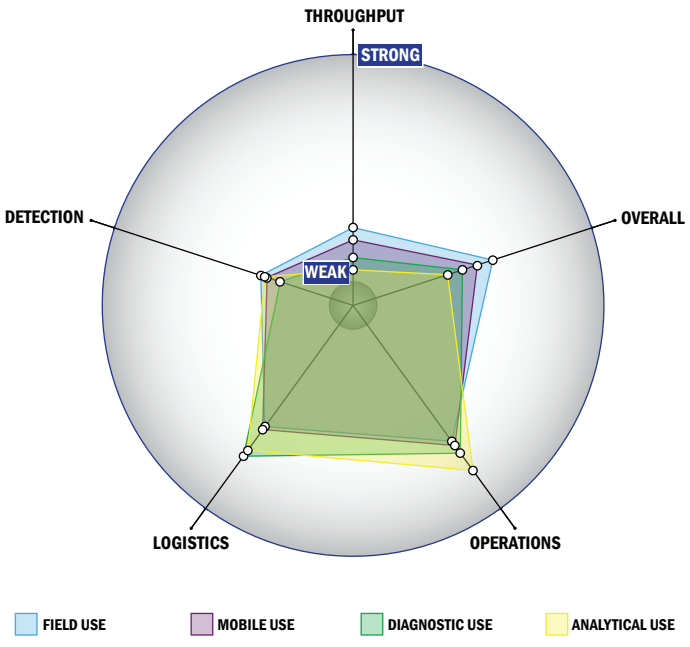
Scoring Analysis

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.



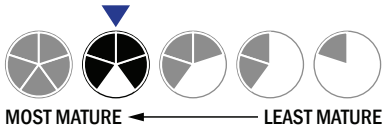
Evaluation Criteria

Throughput:

- Between 15 and 30 minutes for detection
- 1 sample, single test/sample per run
- Less than 32 samples every 2 hours
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- Greater than 20 minutes is required for set-up
- 3-5 steps are required for detection

Logistics:

- An afternoon of training and some technical skills required
- Larger than a home dishwasher
- More than 50 kg
- Wireless and wired connections are available
- System or device has 110V electrical requirement
- 4-8 hours battery life



Operations:

- Performance is not influenced by relative humidity
- Greater than 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 closed and not available for modification
- The system hardware is closed and not available for modification

Detection:

- Greater than 250 µL
- Superior specificity. System has a false alarm rate approaching zero (~0%)
- Only count rate
- Down to background level radiation for count rate
- System is used for surveying