Smiths Detection - GID-3

GENERAL DESCRIPTION:

GID-3 is highly portable, easy to use and rapidly deployed. As well as point detection, it can monitor the integrity of collective protective systems in vehicles, command bunkers and small ships. GID-3 detects, identifies and measures the concentration levels of Chemical Warfare agents and Toxic Industrial Chemicals (TICs). Operated remotely, the GID-3 provides perimeter protection either as a stand-alone unit, or networked together using hardwired or wireless systems. Vehicle-or ship-mounted, it can monitor contamination of the outside air or alert personnel to the presence of a chemical agent in the vehicle interior.

TECHNICAL DESCRIPTION:

GID-3 employs ion mobility spectrometry technology.

CONTACT INFORMATION

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COST
- N/A/system
- <$1/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	Third Tier	N/A
MOBILE Laboratory	N/A	Second Tier	N/A
DIAGNOSTIC Laboratory	N/A	Top Tier	N/A
ANALYTICAL Laboratory	N/A	Top Tier	N/A

Survey Source
Vendor Supplied Information

Scoring Analysis

System scores are compared across the four scenarios and ranked from highest to lowest.

HIGHEST

SCORE

LOWEST

FIELD USE   MOBILE   DIAGNOSTICS   ANALYTICAL
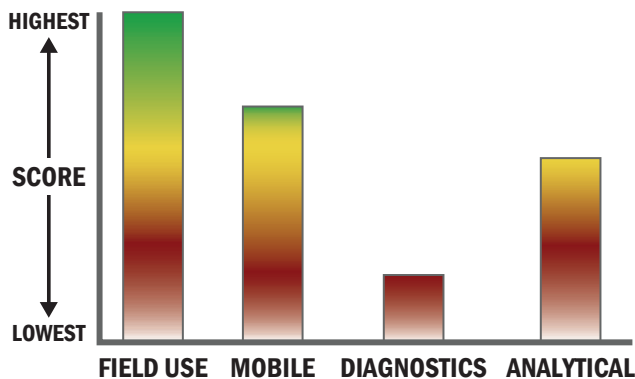
Impact Chart

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.

THROUGHPUT

STRONG

DETECTION

OVERALL

WEAK

LOGISTICS

OPERATIONS

FIELD USE   MOBILE USE   DIAGNOSTIC USE   ANALYTICAL USE
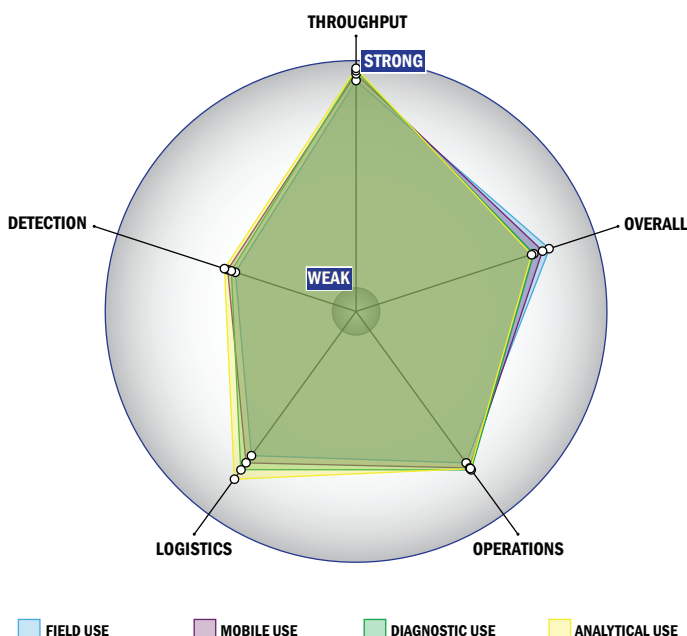
Evaluation Criteria

Throughput:
- Detection is instantaneous
- 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 fully automated
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 2 components
- Less than 5 minutes is required for set-up
- Automatic 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

MOST MATURE ← LEAST MATURE
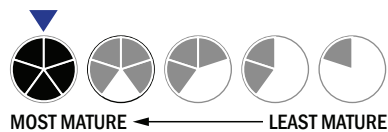
Operations:
- Can be used from < -21°C to > 42°C (All temperatures)
- Performance is not influenced by relative humidity
- Greater than 3 years shelf life
- Greater than 10 years expected life
- Results cannot be viewed in real-time
- The system or device is currently fully autonomous
- The system software is closed and not available for modification
- 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
- Less than 10 μL
- Excellent specificity. System has occasional false alarms under certain conditions (<2%)
- $>1\text{x}10^{-3}$ mg/m^3
- 1 ppb-1 ppm
- Possible system could identify aerosolized chemical agent
- System currently can identify liquid chemical agent