

Morpho Detection, Inc. - StreetLab® Mobile



GENERAL DESCRIPTION:

- Innovative threat identification technology
- Optimized for field use
- Identifies broad range of substances, i.e., toxic industrial chemicals (TICs), toxic industrial materials (TIMs), explosives, chemical warfare agents (CWAs), narcotics, precursors, and white powders
- Samples chemicals through glass, plastic, transparent- and even some translucent-materials
- No sample preparation required for chemical identification
- < 2 minute analysis for most compounds
- "Point-and-shoot" one-hand operation with joystick controls
- Simple software interface delivers on-board results
- 24 x 7 technical support and spectral analysis by hazmat-trained analytical chemists
- Lightweight unit: 6.5 lbs (3.0 kg) including battery
- 5 hour battery life for field operation (2 batteries provided)
- Hard case for added protection during shipping and transportation
- Extended Wireless Capability. Remote control operation to safely interrogate samples from a distance
- Rugged, Go-Anywhere Design. Large buttons, trigger activation and joystick enables operation in Level A gear.
- LEXAN® EXL fabrication with rubber molding for strength, durability and resistance to corrosive chemicals
- Submersible for full post-use decontamination, meets IP67 rating.
- Expandable Library & Accurate Mixture Analysis. Extensive and expandable threat libraries drawn from Environmental Protection Agency (EPA) and hazardous materials lists.
- Quick analysis of chemicals and mixtures
- Accurately identifies chemicals in mixtures at concentrations as low as 10% (dependent on mixture's specific chemical(s) and substances.)



TECHNICAL DESCRIPTION:

StreetLab® Mobile identifies chemical substances using Raman spectroscopy, which permits samples to be analyzed with lasers and can be used to identify a wide range of substances including toxic industrial chemicals, explosives, and narcotics. Results are clear, repeatable and completed with minimal operator interaction.

- Direct Measurement—evaluates the molecular activities of chemicals
- Analyzes frequency shifts in laser light as it scatters off a sample to identify sample's unique "spectral fingerprint"
- Recognizes substances in the bulk-phase Raman spectrum—effective only with substances that have a Raman spectrum

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

Vendor Supplied Information

CONTACT INFORMATION

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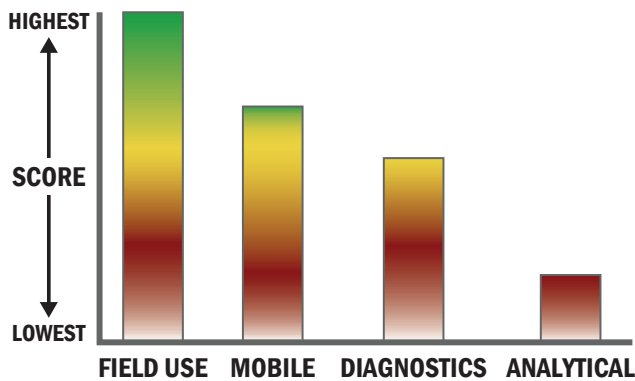
COST

- \$35,000/system
- \$0/analysis



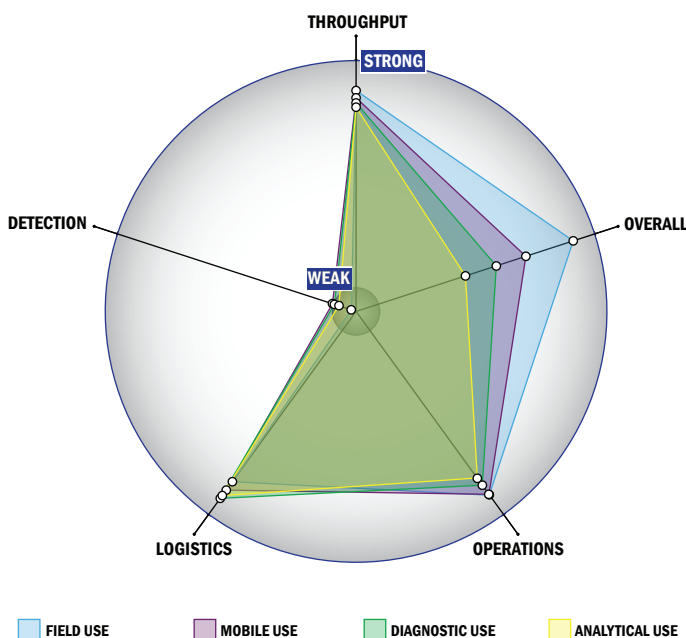
Scoring Analysis

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.



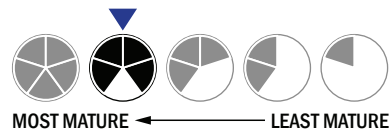
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- Continuous operation with no defined runs
- 349-96 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
- 3-5 steps are required for detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a toaster
- Between 1 and 5 kg
- Wireless and wired connections are available
- System or device uses batteries
- 4-8 hours battery life



Operations:

- Can be used from -21°C to 42°C (All temperatures)
- Performance is not influenced by relative humidity
- 5-10 years expected life
- Results can be viewed in real-time
- The system could be adapted to a fully autonomous system with some effort
- 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
- System currently can identify liquid chemical agent