

StreetLab® Mobile

Breakthrough 2-in-1 Technology

Identify Chemical and Biological Threats with One Fast, Rugged Tool

Built to quickly and accurately identify threats in the field, Morpho Detection's StreetLab® Mobile delivers breakthrough 2-in-1 chemical and biological identification capabilities in a go-anywhere, user-friendly handheld unit. StreetLab Mobile can identify chemical and biological substances in a wide range of environments using Raman spectroscopy. Rugged, yet ergonomic and lightweight, StreetLab Mobile reliably identifies liquids, powders, and solids without subjective interpretation.

Flexibility in the Field

Designed with input from the hazmat community, StreetLab Mobile is ergonomically optimized for ease-of-use in Level A gear, with large buttons, simple on-board LCD screen readouts, joystick function and "point-and-shoot" one-handed operation. Made of highly durable and fully decontaminable LEXAN®, it's ready to perform in the most challenging environments—even in the hot zone.



Benefits

- Single unit detects chemical (including explosives and drugs) and biological threats using Raman technology
- Water tight and toughened to IP67 ratings for extreme conditions and dunkable decontamination
- Wireless remote operation—with up to 500m range line of sight
- One-hand operation for true "hot zone" use in Level A gear
- Simple and clear substance identification of solids, liquids and powders



Partner

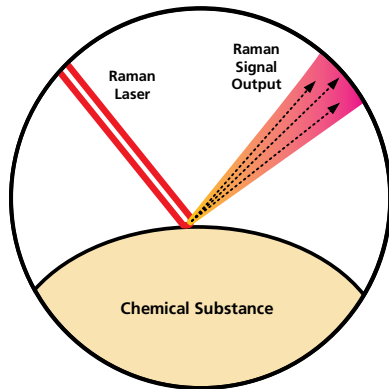


Morpho Detection
SAFRAN Group

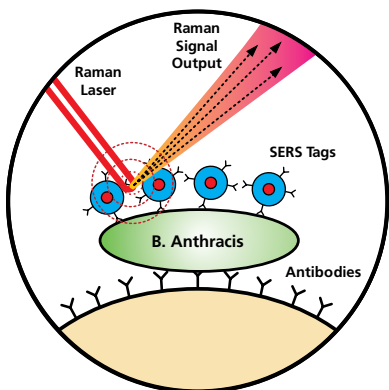
Dual Chemical and Biological Identification in a Single Raman Unit

Breakthrough 2-in-1 Technology

StreetLab Mobile identifies both chemical and biological 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, narcotics and biologicals. Results are clear, repeatable and completed with minimal operator interaction.



Chemical Raman Spectroscopic Analysis: Measures laser interaction with sample



Biological Surface Enhanced Raman Spectroscopy Analysis: Measures Raman signal of SERS Tag specific for pathogen of interest.

Chemical Identification using Raman

- 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

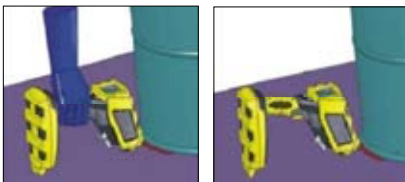
Biological Identification using Raman with SERS Tags

- Indirect Measurement—detects the Raman spectrum of a Surface Enhanced Raman Spectroscopy (SERS)
- Tag specific for the pathogen being identified; this specific SERS Tag will only bind to the specific biological pathogen of concern
- SERS Tags enhance the speed, sensitivity and reliability of identifying biological concerns
- Limited biological sample preparation and no wash step required

Maximized Operability for Minimized Exposure

With extended-range wireless technology and hands-free remote operation, StreetLab Mobile enables sample interrogation from a safe distance. When operated via remote control, the unattended unit can analyze substances and transmit results wirelessly from right inside the hot zone and in other extreme conditions, allowing incident command to make tactical decisions faster and more effectively while minimizing exposure to threats. Data can be easily emailed to labs or Morpho Detection (MDI) Technical Support during hot zone operations.

Operational Versatility



One-hand

Hands-free

Wireless Modem Technology



Extended-range wireless enables results to be transmitted directly from the hot zone

Raman Spectroscopy Analysis



Same core technology and ease-of-use interface to identify both biologicals and chemicals

Innovative Threat Identification Technology, Optimized for Field Use

Versatile

- Identifies broad range of substances, i.e., toxic industrial chemicals (TICs), toxic industrial materials (TIMs), explosives, chemical warfare agents (CWAs), narcotics, precursors, white powders and biological pathogens
 - Samples chemicals through glass, plastic, transparent– and even some translucent–materials
 - Analyzes pills, powders, liquids and solids
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Fast

- No sample preparation required for chemical identification
 - Chemical identification results: < 2 minute analysis for most compounds
 - Biological identification results: a. Initial test results: sample preparation 15 minutes; analysis time: 3 minutes
b. Parallel processing enables subsequent test results every 3 minutes
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Accurate

- Rapid automated calibration to ensure operational accuracy
 - Minimal sample preparation and test interpretation minimizes human error
 - Standardized libraries provide precise results
 - Reliable pathogen-antibody binding ensures MDI's unique SERS Tags enable consistent biological identification results
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Sample/Process

- Automatically saves test results, preventing intentional or accidental modification or deletions
 - Integrated sample vial holder allows for added sampling flexibility
 - Non-destructive chemical testing preserves samples for additional test and/or for use as evidence
 - Requires limited biological sample material
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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
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Extended Wireless Capability

- Remote control operation to safely interrogate samples from a distance
 - Transmit results quickly to remote computer
 - Maximized urban line-of-sight: ~1,500 ft (500 m)
 - Wireless modem technology
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Easy to Operate

- “Point-and-shoot” one-hand operation with joystick controls
 - Optimized balance allows for stable one-hand or hands-free analysis
 - Simple software interface delivers on-board results
 - Single trigger pull switches between biological and chemical modes
 - Simple process for biological identification enables operation in Level A gear
 - 24 x 7 technical support and spectral analysis by hazmat-trained analytical chemists
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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%*
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Portable

- 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
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Cost-effective

- Limited maintenance, potentially minimizing operational costs
 - Can help customers reduce capital investments by providing a single solution for chemical and biological identification
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*Dependent on mixture's specific chemical(s) and substances.

Worldwide Locations

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www.morphodetection.com

Specifications

Laser:
785 nm

Battery Life:
> 5 hrs each

Start up Time:
~30 sec

Average Scan:
Chemical substances:

- Sample-dependant;
most < 2 minutes

Biological substances:

- Initial test results: sample preparation 15 minutes; analysis time: 3 minutes
- Parallel processing enables subsequent test results every 3 minutes

Operation:

Chemical: "Point-and-shoot", hands-free, vial and wireless remote control

Biological: Field-friendly process for sample preparation and identification

Single trigger pull switches between biological and chemical modes

Storage Temperature:

Equipment: 5 to 122°F (-15 to 50°C)

Biological consumables: 41 to 104°F (5 to 40°C)

Operating Temperature:

Equipment: 32 to 113°F (0 to 45°C)

Biological consumables: 41 to 104°F (5 to 40°C)

User Interface:

Joystick + 2 buttons + trigger

Substance Libraries:

Chemical: Ongoing library expansion (Additional substances can be added to libraries. It is strongly recommended that this only be performed with the assistance of Morpho Detection.)

Biological: Anthrax and E.coli available
Tularemia, Ricin, Plague, Smallpox, Botulinum Toxin and others to be added

Wireless:

Wireless modem technology
900MHz and 2.4GHz available

Wireless Range:

Estimated urban line-of-sight: ~1,500 ft (500 m)

I/O:

DC Input, 2 USB, USB to ethernet

Dimensions

(Equipment only, does not include accessories)

Height	15 in (38.1 cm)
Width	5.5 in (14 cm)
Depth	8 in (20.3 cm)
Weight (including battery)	6.5 lbs (3 kg)

