

M256A1



GENERAL DESCRIPTION:

The M256A1 is used to confirm the absence, or detect the presence, of chemical agents. Use of the kit can also determine the type of agent present: nerve, blister, blood Lewisite or Mustard.



The kit contains:

- 12 Sampler-Detectors
- One booklet of M8 Paper
- Instruction cards attached by a lanyard to the plastic carrying case.

TECHNICAL DESCRIPTION:

The sampler-detectors consist of a series of ampoules containing reagents. The ampoules are attached to a small hand-held card. When the ampoules are crushed between the fingers, the liquid reagents can flow down plastic tubes to three distinctively shaped test spots.

Each test spot is open to the air and, when the reagent wets the test spot, it interacts with the chemical agent in the air, and will turn the test spot a certain color.

If there is no agent present, then there will be no reaction. The reaction indicates whether a chemical agent is, or is not, present in the air.

For example, a color change in the square area indicates the presence of blister agents, the circular test spot is for blood agents, and the star-shaped field signals nerve agents.

The sampler-detectors identify the following agents:

- Nerve Agents (V- and G- types)
- Blister Agents (CX, HD, L)
- Blood Agents (AC, CK)
- Lewisite (L)
- Mustard (H, HD, HN, and HT)
- The kit does not need to be pointed in a certain direction for it to detect chemical agents, nor does it require a close proximity to work effectively

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

CONTACT INFORMATION

Luxfer Magtech
2940 Highland Avenue, Unit 210
Cincinnati, OH 45212
Tel: 800-503-4483

COST

System:

- Single Kit (36601): \$160/system
- Case, 24 Kits (36600): \$2,964/system

Analysis:

- N/A/analysis

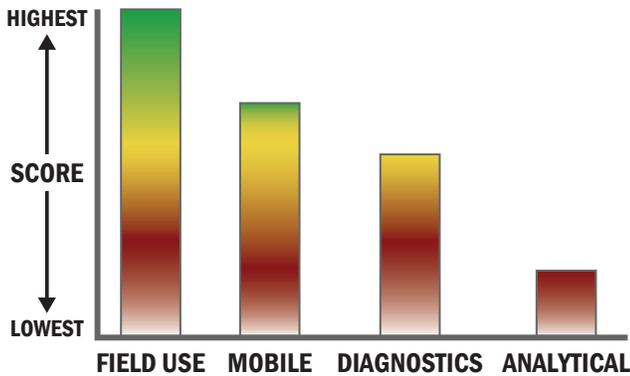
Survey Source

Open Source Internet



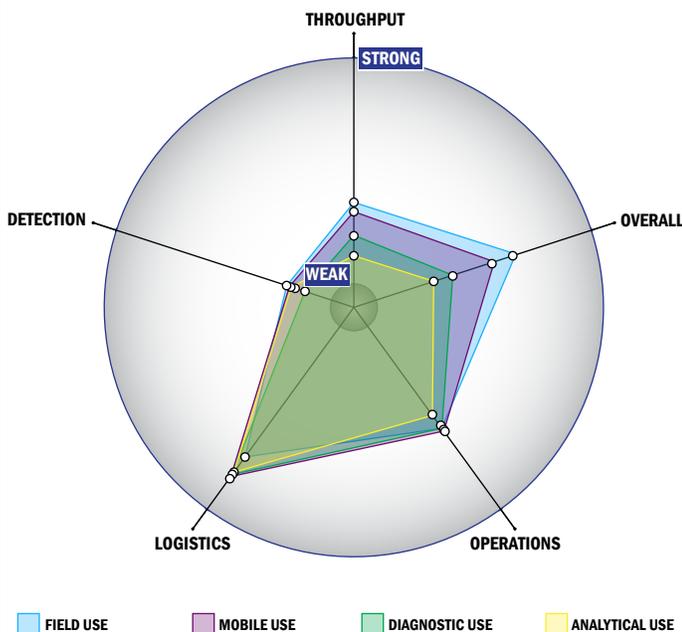
Scoring Analysis

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.



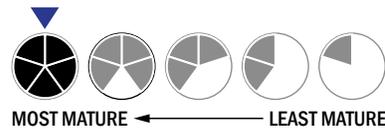
Evaluation Criteria

Throughput:

- Between 15 and 30 minutes for detection
- 1 sample, <10 tests/sample per run
- Less than 32 samples every 2 hour
- The system or approach is not amenable to full or semi-automation
- Device or system is designed for a single use
- 0-1 solutions, buffer, eluents, and/or reagents
- 5 or more components
- For set-up
- For detection

Logistics:

- An afternoon of training and some technical skills required
- Approximately the size of a soda can
- Less than 1 kg
- This system is not capable of transmitting data
- There is no electrical requirement



Operations:

- Can be used from -21 °C to 41 °C
- Components must be stored at room temperature (27 °C)
- Performance is not influenced by relative humidity
- The system is not capable of autonomy
- The system does not employ any software

Detection:

- Not possible for the system to achieve 510K clearance
- Not possible for the system to achieve FDA approval
- Less than 10 µl
- > 1x10⁻³ mg/m³
- 1 ppm – 100 ppm
- Currently can identify aerosolized chemical agent
- Currently can identify liquid chemical agent