M18A3 Chemical Agent Detector Kits

GENERAL DESCRIPTION:

The M18A3 Chemical Agent Detector Kit is designed primarily for detecting dangerous concentrations of vapors, aerosols, and liquid droplets of the chemical agents listed below. This kit will be used primarily by chemical specialty personnel assigned at the organizational level. This kit's capability provides for the sampling of unknown NBC agents. If a chemical agent is suspected but cannot be detected with the kit, vapor samples can be collected in sampling tubes for forwarding to a laboratory for identification. The principle uses of the kit are:

- For reconnaissance in areas suspected of chemical agent contamination.
- For finding the boundaries of contaminated areas.
- For determining the absence of a chemical agent so that following a chemical attack, unmasking can occur.
- For testing for the presence of a chemical agent after decontamination.
- For collecting samples of suspected but unidentified chemical agents.

TECHNICAL DESCRIPTION:

Agents listed below are detected by the M18A3 Chemical

Agent Detector Kit:

- Cyanogen Chloride (CK)
- Mustards [(H), (HD), (HN), and (HT)]
- Phosgene Oxime (CX)
- Hydrocyanic Acid (AC)
- Phosgene (CG)
- Lewisite (L)
- Ethyl Dichloroarsine (ED)
- Methyl Dichloroarsine (MD)
- Nerve Agents (V- and G-agents)

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

Open Source Internet

CONTACT INFORMATION

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

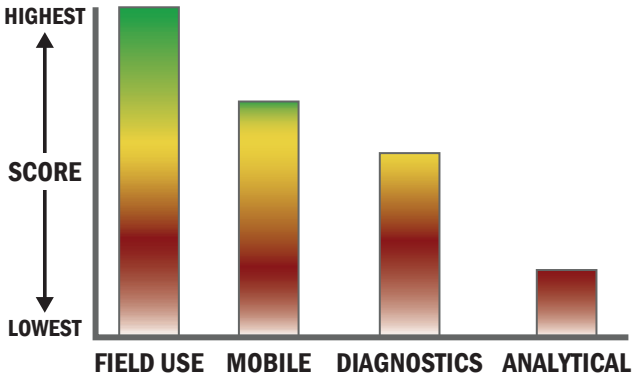
COST

System:
- Single Kit: $1,288/system
- Case, 24 Kits: $17,760/system

Analysis:
- N/A/analysis

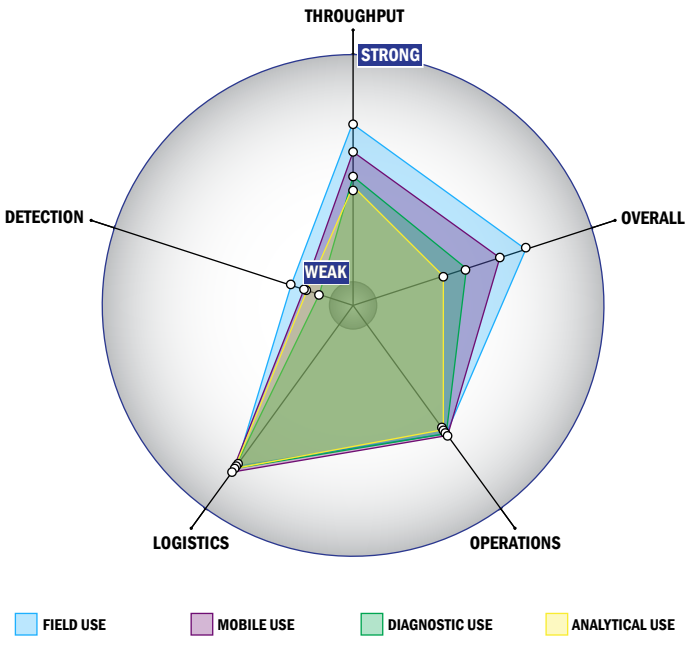
Scoring Analysis

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.



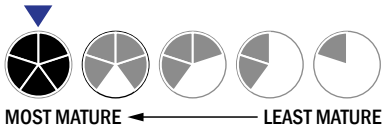
Evaluation Criteria

Throughput:

- Between 2 and 15 minutes for detection
- 1 sample, single test/ sample per run
- The system or device is currently semi-automated
- Device or system is designed for a single use
- 0-1 solutions, buffer, eluents, and/or reagents
- 0 components
- No set-up of the system is required

Logistics:

- An afternoon of training and some technical skills required
- Approximately the size of a toaster
- 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 > 42°C (All temperatures)
- Performance is not influenced by relative humidity
- Greater than 3 years shelf life
- The system is not capable of autonomy
- The system does not employ any software
- The system is single use or this question does not apply to this device

Detection:

- Not possible for the system to achieve clearance
- Not possible for the system to achieve approval
- This system does not test liquids and this question does not apply
- > 1x10^-3 mg/m^3
- Does not detect liquid samples
- System can identify aerosolized chemical agent
- System can identify liquid chemical agent