Polimaster, Inc. - Combined Gamma Dosimeter and Chemical Agent Detector PM2012M

GENERAL DESCRIPTION:

Combined Gamma Dosimeter and Chemical Agent Detector PM2012M is a two-in-one instrument featuring chemical detector and gamma radiation detector in one unit. The device is designed to detect chemical warfare agents and toxic compounds and differentiate between organophosphorus and arsenic-containing compounds, as well as continuously monitor radiation background, measure gamma dose and dose rate and provide audible, visual alarms when preset thresholds are exceeded is invaluable for first responders, police officers, military, and customs and border patrol services in the day-to-day monitoring of public safety as well as in special HazMat operations. It can be used as a personal detector, a monitor for surveying contaminated areas, or as a fixed-installed detector

TECHNICAL DESCRIPTION:

For Combined Gamma Dosimeter and Chemical Agent Detector PM2012M: Instrument's operation principle in the TCV air presence detection mode is based on toxic chemical vapors detection module. Instrument measures current strength of the ionization chamber with beta-source 63Ni. Analyzed air at that is forcedly pumped through the chamber by micro purge pump. Microprocessor-based controller with internal analog-digital converter controls GEDM and TCVDM modules. Instrument operation algorithm enables continuous measurement of ambient dose equivalent of gamma- and roentgen radiation H*(10) , measurement of photon emission ambient dose equivalent H*(10) and detection of toxic vapors air presence, statistical analysis of measurement data, and quick adaptation to variations of radiation strength (setting of measurement time periods irreversibly to radiation strength). Internal non-volatile instrument's memory accumulates and stores information. IR-link is used for MPC-PC information communication.

CONTACT INFORMATION

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COST

- $7,282/system
- $500/analysis

Tier Selection

Final tier assignment is based on overall product score.

Top Tier | Second Tier | Third Tier | Fourth Tier | Bottom Tier

RANKINGS

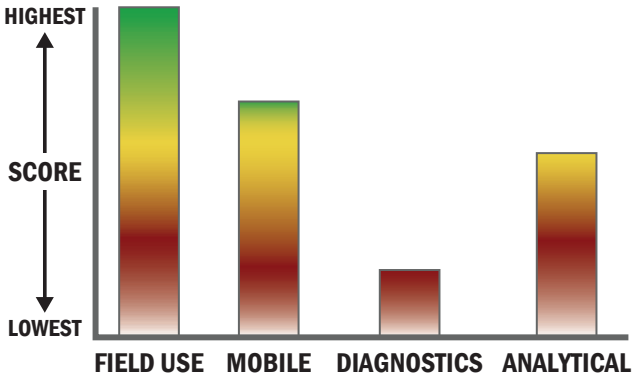
	Biological	Chemical	Radiological
FIELD USE System	N/A	N/A	Bottom Tier
MOBILE Laboratory	N/A	N/A	Fourth Tier
DIAGNOSTIC Laboratory	N/A	N/A	Bottom Tier
ANALYTICAL Laboratory	N/A	N/A	Bottom Tier

Survey Source

Vendor and Internet Supplied Information

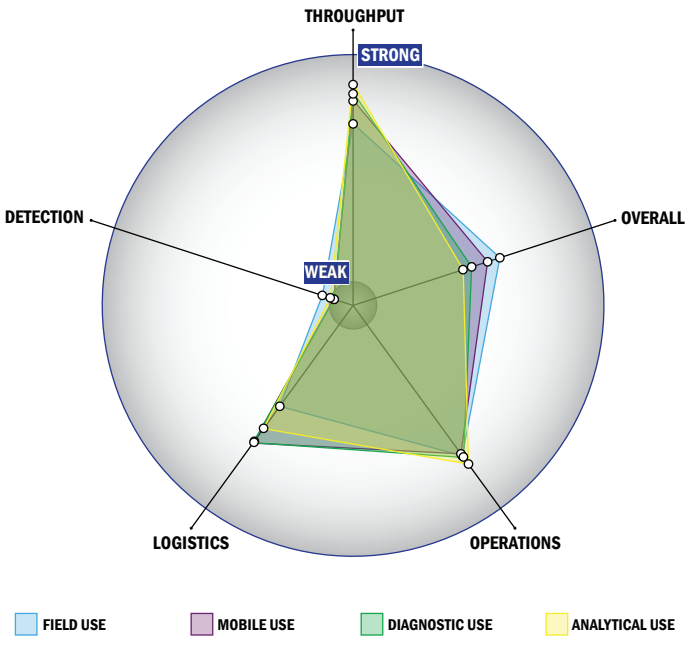
Scoring Analysis

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.



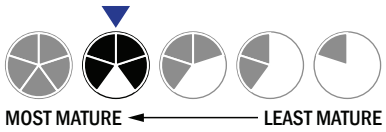
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- Multiple samples, multiple tests/sample per run
- 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
- Less than 5 minutes is required for set-up
- 1-2 steps are required for detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Less than 1 kg
- Wireless and wired connections are available



Operations:

- Performance is not influenced by relative humidity
- Greater than 3 years shelf life
- 5-10 years expected life
- Results can 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:

- Not possible for the system to achieve 510K clearance
- Not possible for the system to achieve FDA approval
- This system does not test liquids
- Total dose and dose rate
- System is used for surveying