Polimaster, Inc. - Personal Compact Dosimeter PM1604A (B)

GENERAL DESCRIPTION:

The compact personal dosimeter PM1604A(B) is a miniature energy-compensated personal dosimeter that measures both personal dose equivalent and personal dose equivalent rate of both gamma and X-ray radiation. Recommended for professionals who work with or around the radioactive materials. The instrument automatically compares the average dose and dose rate of gamma radiation from the detector with the alarm threshold value chosen by the user. If the threshold value is exceeded, the instrument triggers an audible alarm. The user interface has friendly controls for routine operation and is characterized by simplicity, as well as by the convenient location of control buttons to switch between modes and settings. Thus the device can be operated even by the non-trained users, without any experience in radiation control.

TECHNICAL DESCRIPTION:

The dosimeter measures personal dose equivalent and personal dose equivalent rate of both gamma and X-ray radiation in a wide range. The functionality of the device based on the principle that some materials (radiation detectors) can register and detect gamma radiation. Production technology utilizes Geiger-Muller counters. Geiger-Muller counter utilizes small metal tubes filled with inert gas. When gas molecules inside the tube are excited by the incident radiation, they create an electrical current for the readout. The magnitude of the current is proportional to the energy of an incident photons and therefore of dose of incident radiation.

CONTACT INFORMATION

Polimaster, Inc.
2300 Clarendon Blvd. Suite 708
Arlington VA, 22201
POC: Vladimir Kanevsky President
703-525-5075 or 703-608-3850
kanevsky@polimaster.us
www.polimaster.us

COST

- $611-$700/system
- $0/analysis

Tier Selection

Final tier assignment is based on overall product score.

Top Tier Second Tier Third Tier Fourth Tier Bottom Tier

RANKINGS

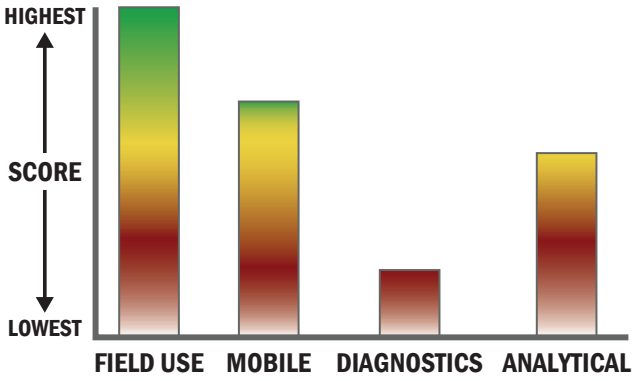
	Biological	Chemical	Radiological
FIELD USE System	N/A	N/A	
MOBILE Laboratory	N/A	N/A	
DIAGNOSTIC Laboratory	N/A	N/A	
ANALYTICAL Laboratory	N/A	N/A	

Survey Source

Vendor and Internet Supplied Information

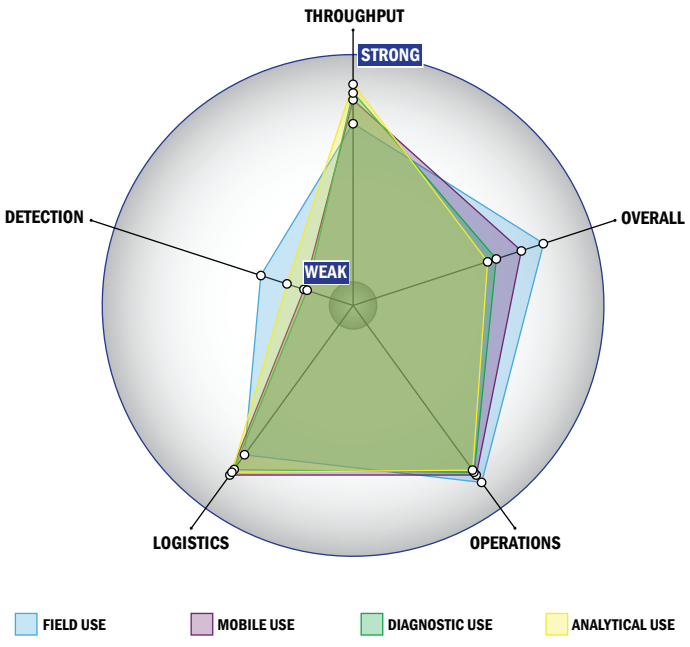
Scoring Analysis

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.



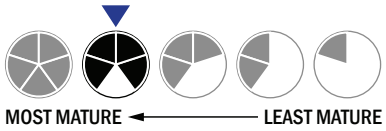
Evaluation Criteria

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
- Approximately the size of a soda can
- Less than 1 kg
- Wireless and wired connections are available
- System or device uses batteries



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
- 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:

- This system does not test liquids
- Only total dose and dose rate
- Down to background level radiation for dose rate
- System is used for personnel detection