Ludlum Measurements, Inc. - Ludlum Model 9DP

GENERAL DESCRIPTION:

The Ludlum Model 9DP, pressurized ion chamber meter, provides highly sensitive measurements of exposure and exposure rate. It can simultaneously display the exposure rate and integrated value or the highest rate seen by the instrument. The integrated value can be reset (if desired) using one of the four convenient front-panel mounted buttons. The stunning 256-color, bit-mapped display provides an optimized presentation of the data and is accompanied with icons informing the user of the active functions and instrument status. All logged data are written in csv format to a plugged-in, industry standard, USB thumb drive for convenient retrieval by a PC spreadsheet or database program. Alarms are manifested using color changes on the display and an acknowledgeable audio output.

TECHNICAL DESCRIPTION:

RADIATION DETECTED: gamma & X-rays above 25 keV; beta above 1 MeV

OPERATING RANGES:

- With R/hr units: 0–500 µR/hr, 0–5 mR/hr, 0–50 mR/hr, 0–500 mR /hr, 0–5 R/hr
- With Sv/h units: 0–5 µSv/h, 0–50 µSv/h, 0–500 µSv/h, 0–5 mSv/h, 0–50 mSv/h

CHAMBER VOLUME: 230 cc (14 in^3) volume pressurized to 8 atmospheres (117 psi)

ACCURACY: +/-10%

RESPONSE TIME: 5 seconds in lowest range, 2 seconds in all other ranges, when measuring from 10% to 90% of final value

CONTACT INFORMATION

Ludlum Measurements, Inc.
501 Oak Street
Sweetwater, TX 79556

COST

- $2,285/system
- $125/analysis

Tier Selection

Final tier assignment is based on overall product score.

Top Tier Second Tier Third Tier Fourth Tier Bottom Tier

RANKINGS

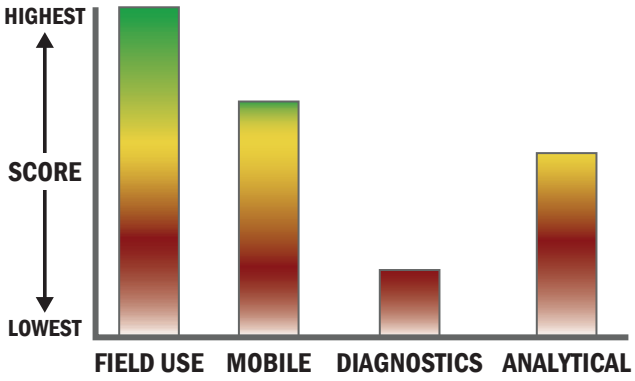
	Biological	Chemical	Radiological
FIELD USE System	N/A	N/A	Fourth Tier
MOBILE Laboratory	N/A	N/A	Fourth Tier
DIAGNOSTIC Laboratory	N/A	N/A	Bottom Tier
ANALYTICAL Laboratory	N/A	N/A	Fourth Tier

Survey Source

Vendor Supplied Information

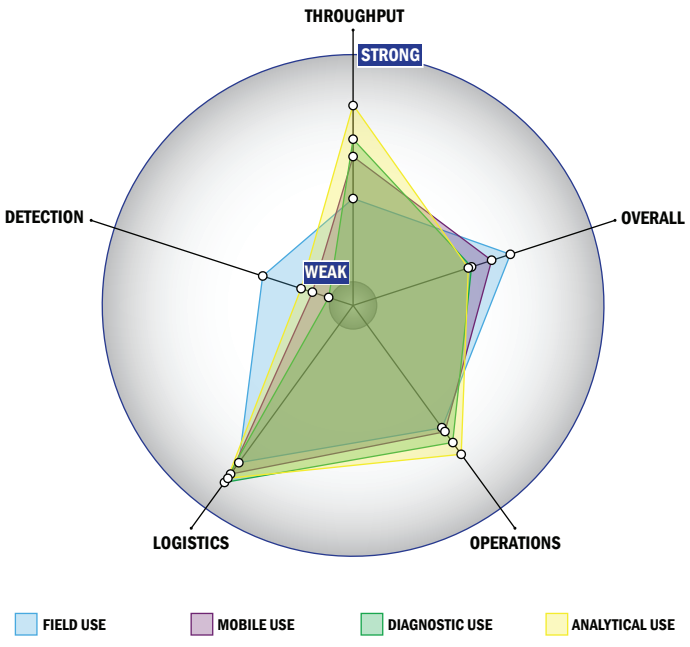
Scoring Analysis

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.



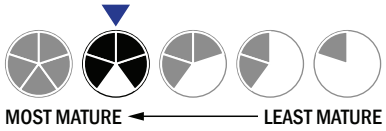
Evaluation Criteria

Throughput:

- Detection is instantaneous
- Continuous operation with no defined runs
- System is continuous and provides real time analysis with no defined tests/samples
- The system or approach is not amenable to full or semi-automation
- Device or system is intended for multiple detection assays
- 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 toaster
- Between 1 and 5 kg
- System or device uses batteries
- 4-8 hours battery life



Operations:

- Can be used from -21°C to 41°C
- Performance is not influenced by relative humidity
- 5-10 years expected life
- Results can be viewed in real-time
- The system could easily be adapted into a fully autonomous system
- The system software is closed and not available for modification
- The system hardware is closed and not available for modification

Detection:

- Down to background level radiation for dose rate
- Down to background level radiation for count rate
- System is used for surveying