Fluke Biomedical - 451P microR Ion Chamber Survey Meter

GENERAL DESCRIPTION:

The 451P state-of-the-art ion chamber survey meter is a handheld battery operated unit designed for use in both rugged and normal environments. The 451P is a pressurized ion chamber for µR resolution. The 451P has auto-ranging and measure radiation rate and accumulated dose from various radiation sources (x-ray and gamma). The ion chamber detector allows for a fast response time to radiation from leakage, scatter beams, and pinholes. Additionally, the low-noise chamber bias supply provides for fast background-settling time.

TECHNICAL DESCRIPTION:

Pressurized ion chamber technology.

CONTACT INFORMATION

Fluke Biomedical
6920 Seaway Blvd
Everett, Wa. 98203
www.flukebiomedical.com

COST

- $2,700/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

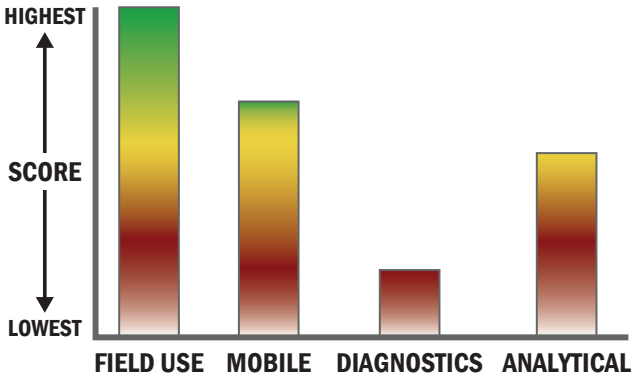
	Biological	Chemical	Radiological
FIELD USE System	N/A	N/A	Fourth Tier
MOBILE Laboratory	N/A	N/A	Bottom Tier
DIAGNOSTIC Laboratory	N/A	N/A	Bottom Tier
ANALYTICAL Laboratory	N/A	N/A	Bottom Tier

Survey Source

Vendor Supplied Information

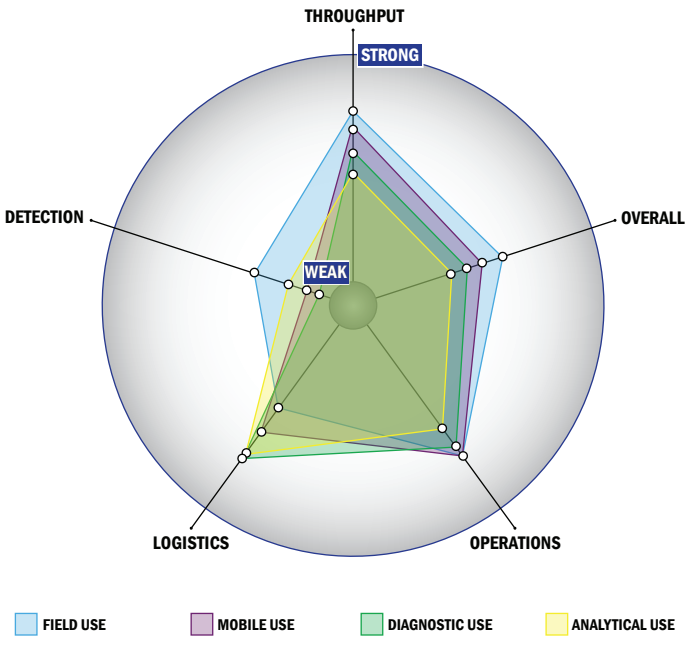
Scoring Analysis

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.



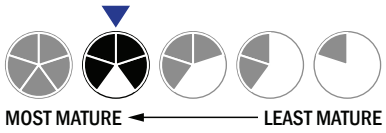
Evaluation Criteria

Throughput:

- 2 minutes or less for detection
- 1 sample, single test/sample per run
- 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
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- 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
- Is commercially available



Operations:

- Can be used from < -21°C to > 42°C (All temperatures)
- This system does not require consumable components
- 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 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 510K clearance
- Not possible for the system to achieve FDA approval
- This system does not test liquids and this question does not apply
- Excellent specificity. System has occasional false alarms under certain conditions (<2%)
- Displays only total dose and dose rate
- Down to background level radiation detection (i.e., gamma 1 uR/hr)
- This system does not measure count rate
- System is used for surveying