Fluidigm - The BioMark and BioMark HD System For Real-Time PCR

GENERAL DESCRIPTION:

The BioMark Family of systems are designed for high throughput real-time PCR. The system is designed for research use only.

TECHNICAL DESCRIPTION:

The BioMark Family of Real-Time PCR systems enables high throughput real time PCR with nanoliter sized reaction volumes through the use of microfluidics. The microfluidic architecture does the work of combining samples and assays into 9,216 simultaneous PCR reactions, which is 24-fold more data than that produced by a 384-well plate.

CONTACT INFORMATION

Fluidigm
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COST

- $250,000/system
- $15-$18/analysis

Tier Selection

Final tier assignment is based on overall product score.

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

RANKINGS

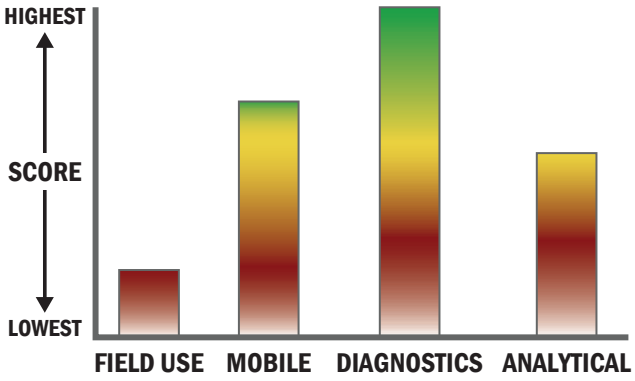
	Biological	Chemical	Radiological
FIELD USE System	Bottom Tier	N/A	N/A
MOBILE Laboratory	Bottom Tier	N/A	N/A
DIAGNOSTIC Laboratory	Fourth Tier	N/A	N/A
ANALYTICAL Laboratory	Bottom Tier	N/A	N/A

Survey Source

Vendor and Internet Supplied Information

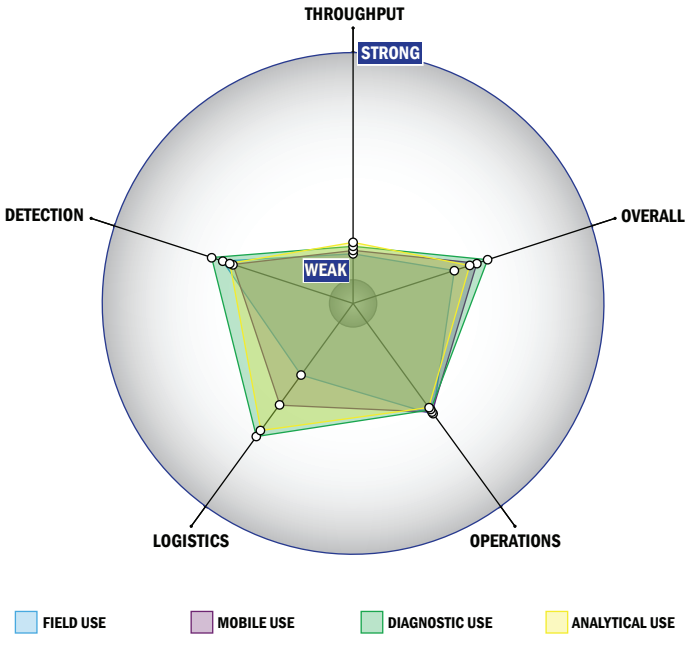
Scoring Analysis

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.



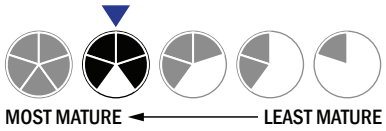
Evaluation Criteria

Throughput:

- Between 60 minutes and 8 hours for detection
- Multiple samples, multiple tests/sample per run
- The system could be adapted to a semi-automated system with some effort
- Device or system is intended for multiple detection assays
- 5 or more solutions, buffer, eluents, and/or reagents
- 3 components
- Greater than 20 minutes is required for set-up
- Greater than 12 steps are required for detection

Logistics:

- An afternoon of training and some technical skills required
- Larger than a home dishwasher
- More than 50 kg
- Wired connections are available
- System or device has 110V electrical requirement



Operations:

- Can be used from 25 °C to 37 °C
- Components must be stored at room temperature (27 °C)
- Device or system has peak performance at normal relative humidity conditions
- Between 6 months and 1 year shelf life
- 5-10 years expected life
- Results can be viewed in real-time
- The system is not capable of autonomy
- The system software is closed and not available for modification
- The system hardware is closed and not available for modification

Detection:

- Possible the system could receive 510K clearance, no current efforts at this time
- Possible the system could receive FDA approval, no current efforts at this time
- Less than 10 µL
- 1-100 CFU per mL
- 1-100 PFU per mL
- Manual kit not integrated with the system handles spore lysis