


# Applied Biosystems - 7500 Fast Dx Real-Time PCR Instrument



**GENERAL DESCRIPTION:**  
 The Applied Biosystems® 7500 Fast Dx Real-Time PCR Instrument is a real-time PCR instrument used in conjunction with FDA-cleared assays for diagnostic detection of genetic material. Available assays include the CDC's H1N1 flu virus and Dengue assays.



**TECHNICAL DESCRIPTION:**  
 The Applied Biosystems® 7500 Fast Dx Real-Time PCR Instrument, with SDS v1.4 Software, is a 96-well, 5-color real-time PCR instrument available for in vitro diagnostic use in the laboratory that employs real-time TaqMan® polymerase chain reaction amplification of genes on a peltier-based thermocycling apparatus.

**CONTACT INFORMATION**  
 Applied Biosystems  
 850 Lincoln Centre Drive  
 Foster City, CA 94404  
 650-638-5800  
 www.appliedbiosystems.com

**COST**  
 • \$65,900/system  
 • N/A/analysis

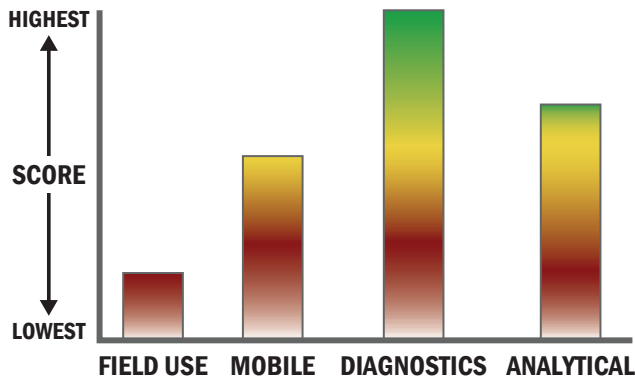
Tier Selection			
Final tier assignment is based on overall product score.			
<input checked="" type="radio"/> Top Tier <input checked="" type="radio"/> Second Tier <input type="radio"/> Third Tier <input type="radio"/> Fourth Tier <input checked="" type="radio"/> Bottom Tier			
RANKINGS			
	Biological	Chemical	Radiological
<b>FIELD USE System</b>			
<b>MOBILE Laboratory</b>			
<b>DIAGNOSTIC Laboratory</b>			
<b>ANALYTICAL Laboratory</b>			

**Notes**  
 This device is used by the DoD and CDC LRN laboratories for real-time PCR analysis.

**Survey Source**  
 Vendor Supplied Information

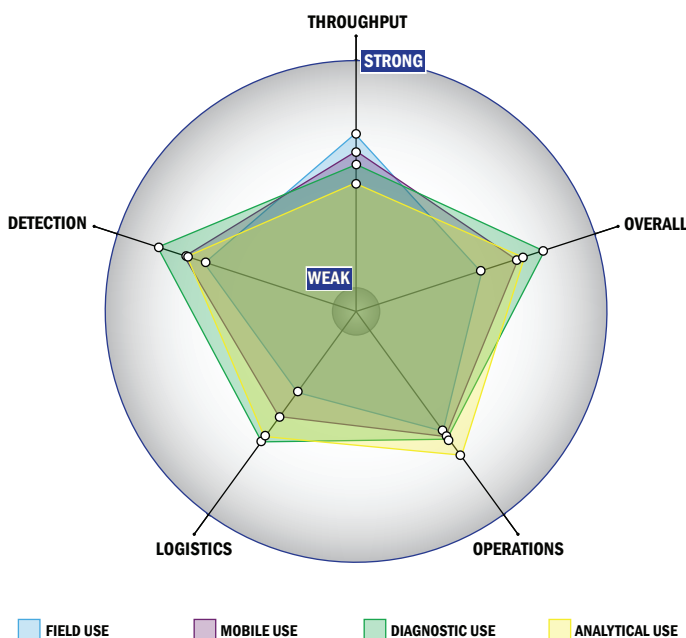
## Scoring Analysis

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.



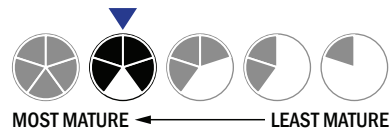
## Evaluation Criteria

### Throughput:

- Between 30 and 60 minutes for detection
- Multiple samples, multiple tests/sample per run
- 349-96 samples every 2 hours
- The system could be adapted to a semi-automated system with some effort
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 3 components
- No set-up of the system is required
- 3-5 steps are required for detection

### Logistics:

- A day of training and technical skills are required
- Approximately the size of a carry-on luggage suitcase
- Between 25 and 50 kg
- Wireless and wired connections are available
- System or device has 110V electrical requirement



### Operations:

- Can be used from 25 °C to 37 °C
- Components must be frozen (-20 °C)
- Performance is not influenced by relative humidity
- 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:

- System currently has 510k clearance
- System currently has FDA approval
- Less than 50 µL
- 1-100 CFU per mL
- 1-100 PFU per mL
- Manual kit not integrated with the system handles spore lysis

