

Applied Biosystems - 7900HT Fast Real-Time PCR System



GENERAL DESCRIPTION:

The Applied Biosystems 7900HT Fast Real-Time PCR System is the only real-time quantitative PCR system that combines 96- and 384-well plate compatibility and the TaqMan® Low Density Array with fully automated robotic loading and now also offers optional Fast real-time PCR capability. The system is intended for laboratory analysis and is versatile and adaptable for many matrices.



TECHNICAL DESCRIPTION:

High Throughput (HT) Real-time TaqMan® and other probe/dye polymerase chain reaction amplification of genes on a Peltier-based thermocycling apparatus.

CONTACT INFORMATION

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COST

N/A

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

Notes

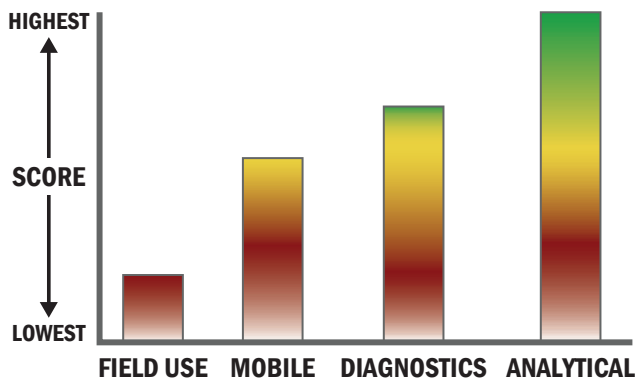
The model 7900 is popular when high throughput is a priority. When lower numbers of samples and lower cost is desired the model 7500 is often selected.

Survey Source

Vendor and Internet Supplied Information

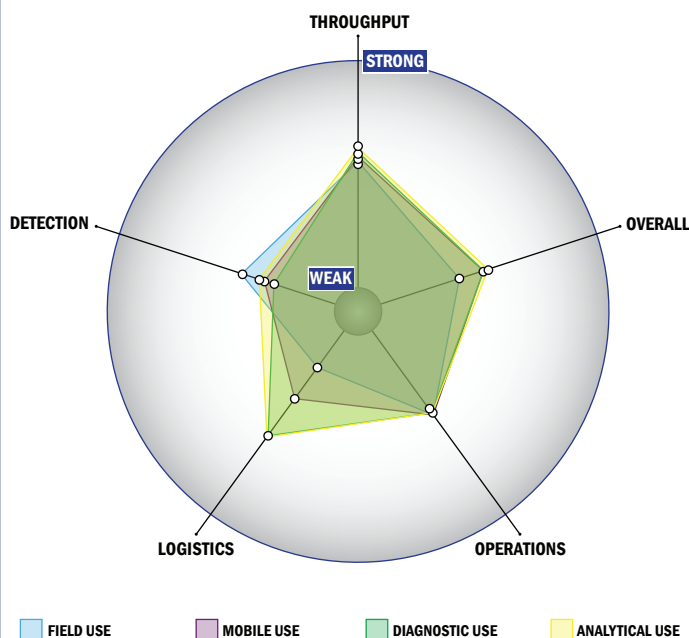
Scoring Analysis

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.



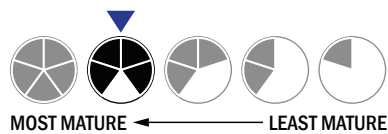
Evaluation Criteria

Throughput:

- Between 60 minutes and 8 hours per assay
- Multiple samples, multiple tests/sample per run
- Greater than 750 samples every 2 hours
- The system or device is currently semi-automated
- Device or system is intended for multiple detection assays
- 3 solutions, buffer, eluents, and/or reagents
- 2 components
- Less than 5 minutes is required for set-up
- 3-5 steps are required for detection

Logistics:

- An afternoon of training and some technical skills required
- Approximately the size of a home dishwasher
- Weighs more than 50 kg
- Wired connections are available
- System or device has 220V electrical requirement
- The device is not intended for portable use
- Is commercially available



Operations:

- Can be used from 4 °C to 37 °C
- Components must be frozen (-20 °C)
- Yes, device or system has peak performance at normal relative humidity conditions
- Between 1 to 3 years
- 5-10 years shelf 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:

- Not possible for the system to achieve 510K clearance
- Not possible for the system to achieve FDA approval
- Less than 50 µL per analysis
- 1-100 CFU/mL of original sample
- 1-100 PFU/mL of original sample
- Manual kit not integrated with the system handles spore lysis

