BIOSALAB
MOLECULAR BIOLOGY SOLUTIONS
OptimumGene ™ series

# Q2000 Real-Time PCR System

Block sample capacity: 96 wells * 0.1ml ,
both white & clear low profile PCR tubes can be used

Patented drawer type sample block design,
easy to insert & remove sample

10'' TFT Full Color Touch Screen,
real-time graphical display

T-Optical ™ top detection technology,
greatly reduce backgroud noise

◎The new powerful Peltier technology, fast ramping rate up to 6℃/s.

◎T-Optical™ technology, reduce background noise, improve fluorescence signal sensitivity and signal to noise ratio.

◎The angle of display could be adjusted to the best view.

◎96 wells*2/4/6 channels, simultaneous detection of wells, not in sequence.

◎User could view qPCR process and run PCR protocol through self-contained 10" TFT LCD and touch screen.

◎Special designed optical system for qPCR, avoiding more moving parts problems like overheat, wear and off center. Not optical fiber based, avoiding break and block by dust.

◎Long life LED lamps to excite fluorescence and detect with SSLP™ CCD imaging technology.

◎Sample wells with temperature gradient function, convenient to optimize PCR conditions.

◎The drawer design of sample block, makes it easier to pick and place PCR tubes and plates.

◎The qPCR analysis software could be upgraded for free.

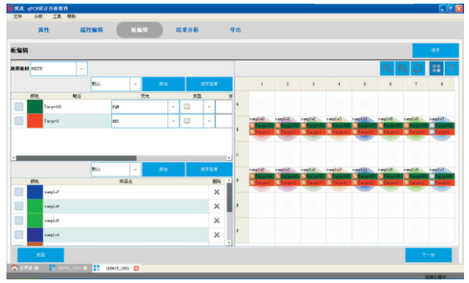


| Model | Q2000A | Q2000B | Q2000C |
|---|---|---|---|
| | **INSTRUMENT PERFORMANCE** | | |
| Sample Block Capacity | 96 wells * 0.1ml | | |
| Reaction Volume | 10–50ul ( recommend 20ul ) | | |
| Tubes Option | Low profile, white or clear PCR tubes or strips or 96 well PCR plate, with optical flat cap | | |
| Heating & Cooling Technology | New generation Peltier technology allow 1,000,000 cycles | | |
| Control Methods | Operated via PC or self-contained touch screen on instrument | | |
| Language | English | | |
| Communications | USB 2.0 & LAN | | |
| Display | 10" Color TFT LCD and Touch Screen | | |
| Max. Number of Programs | Max.15,000 programs onboard, unlimited storage of protocols with USB flash drive | | |
| | **TEMPERATURE** | | |
| Block Temp.Range | 0℃~105℃ | | |
| Max. Heating Rate | 6℃/sec | | |
| Max. Cooling Rate | 5℃/sec | | |
| Temp.Uniformity | ≤ ±0.2℃ at 90℃ | | |
| Temp.Accuracy | ≤ ±0.1℃ (10 seconds after reach 90℃ ) | | |
| Display Resolution | 0.1℃ | | |
| Heat Lid Temp. Range | 30℃~112℃ | | |
| Temp.Control Mode | Block & Calculated sample | | |
| Gradient Range | 30℃ ~ 100℃ | | |
| Temp.Differential Range | 1℃ ~ 30℃ | | |
| | **FLUORESCENCE DETECTION** | | |
| Excitation | Long life LED lamps | | |
| Detection | CCDs | | |
| Dynamic Range | 1 ~ $10^{10}$ | | |
| Sensitivity | ⩾1 copy | | |
| Calibrated Dyes at Installation | F1: FAM、SYBR GREEN<br>F2: VIC、HEX、JOE、CY3、NED | F1: FAM、SYBR GREEN<br>F2: VIC、HEX、JOE、CY3、NED<br>F3: ROX、TEXAS-RED<br>F4: CY5 | F1: FAM、SYBR GREEN<br>F2: VIC、HEX、JOE、CY3、NED<br>F3: ROX、TEXAS-RED<br>F4: CY5<br>F5: CY5.5<br>F6: Reserved |
| Fluorescence Excitation Range | 300 ~ 800nm | | |
| Fluorescence Detection Range | 500 ~ 800nm | | |
| Data Export Formats | EXCEL, TXT | | |
| | **Other Features** | | |
| AC Power Supply | 100 ~ 240V, 50 ~ 60Hz | | |
| Consumption | 600W | | |
| Net Weight | 13 KG | | |
| Dimension ( L×W×H ) | 334×280×365 mm | | |
| Computer Operating Systems | Windows10, Windows7, WindowsXP | | |

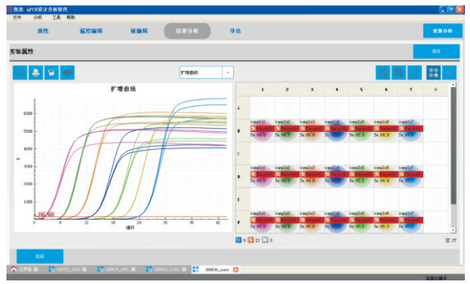
# Q2000 Real-Time PCR System Software

1. Connection via an ethernet cable or via router.
2. Pre-calibrated optics allow you to start using the instrument immediately, no additional calibration is required.
3. Quality control (QC) on data automatically, ensuring reliability of analysis results.
4. Graphical display of protocols, default templates, and real-time run status.

5. Simple and intuitive program, easy to use, without prior reading the user guide horoughly.
6. PCR protocals can be run via a computer network or in the stand -alone mode (using a USB flash drive)
7. Real-time monitoring of amplification curve or melt curve via the 10'' display and touch screen.
8. Intuitive qPCR plate setup.



9. Thermal gradient capability with 12 columns for optimizing PCR reaction protocol.
10. Protocols and plate setups can be saved as templates for future use.
11. Multitasking software, able to analyze multiple experiments at the same time.





12. Varieties of Data Analysis Methods are include.

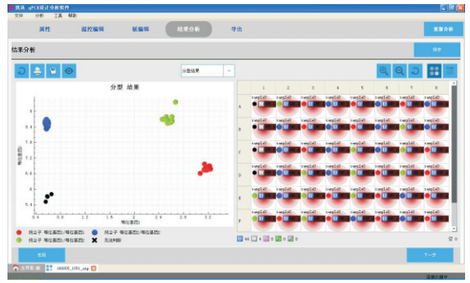
(1) Standard curves for absolute quantification

(2) Melt-curve to verify product identity

(3) Relative quantification for gene expression analysis, with multiple reference genes & amplification efficiency correction

(4) Allelic discrimination (SNP Genotyping) using two allele-specific probes, with automated calling & quality-value assignment

(5) Presence/Absence (Plus/Minus) assays with/without internal positive control (IPC) for pathogen detection



13. A variety of algorithms are included, such as auto-baseline, manual-baseline, auto-threshold, manual-threshold, amplification efficiency (E), able to streamline data analysis.
14. Export results to .xls, .txt.

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