TORONTECH

REAL-TIME PCR SYSTEM (QPCR) – QUANTITATIVE THERMAL CYCLER TT-Q9605T

Real-Time PCR System (qPCR) – Quantitative Thermal Cycler TT-Q9605T is equipped with a 96-well, 5-channel configuration and an advanced optical fiber detection system. This innovative design accelerates imaging and reduces overall cycling time, making it an efficient tool for a variety of applications.

APPLICATIONS

The Torontech TT-Q9605T Real-Time PCR System is engineered for the rapid and precise detection and quantification of nucleic acids (DNA and RNA). By monitoring the amplification of a target sequence in real-time, it provides highly sensitive and specific quantitative data, moving beyond simple presence/absence detection. It is a cornerstone technology for any modern molecular biology laboratory where speed, accuracy, and high throughput are essential.

This powerful quantitative analysis is a critical tool for:

- **Clinical Diagnostics:** For the rapid and sensitive detection and viral load quantification of infectious agents such as viruses (e.g., SARS-CoV-2, HIV, Influenza) and bacteria, enabling timely diagnosis and patient management.
- **Food Safety & Authenticity:** To perform high-throughput screening for foodborne pathogens (e.g., Salmonella, Listeria), detect genetically modified organisms (GMOs), and verify species of origin to combat food fraud.
- **Biomedical Research & Gene Expression:** As a fundamental tool for measuring changes in gene expression levels, which is essential for research in cancer biology, drug discovery, and understanding cellular responses to various stimuli.
- **Environmental & Agricultural Science:** For the detection of microbial contaminants in water and soil, the identification of plant pathogens, and for marker-assisted selection in crop and livestock breeding programs.

FEATURES

1. **High Throughput:** Handles large sample volumes with ease.

2. **Enhanced Sensitivity:** Ensures reliable and accurate results.
3. **Rapid Turnaround:** Delivers faster results for time-sensitive testing.
4. **Advanced Optics:** Multi-channel fluorescence detection for robust performance.
5. **Precise Temperature Control:** Guarantees consistent and reliable thermal cycling.
6. **Cost-Efficiency:** Offers an economical solution for laboratories.
7. **User-Friendly Software:** Intuitive interface for seamless operation.
8. **Comprehensive Data Analysis:** Supports multiple modes for flexible workflows.
9. **Versatile Applications:** Tailored for research, diagnostics, and safety testing.
10. **Research Collaboration Support:** Facilitates teamwork and knowledge sharing.
11. **Dedicated Customer Assistance:** Ensures reliable support and troubleshooting.

TECHNICAL SPECIFICATIONS

Model	TT-Q9605T
Product Description	96-well Real-Time PCR instrument with 5 dye channel filters & 7-inch touchscreen
Sample Capacity	96-well, 0.2mL block
Compatible Plates/Tubes	96-well plates, 8-well strip tubes, single tube
Reaction Volume	20–120 µL
Excitation Source	LED
Excitation Range	475–670 nm
Detection Method	Photodiodes
Detection Range	515–680 nm
Detection Channels	5
Temperature Range	4–100°C

Model	TT-Q9605T
Average Heating/Cooling Rate	3.0°C/sec / 3.0°C/sec
Maximum Heating/Cooling Rate	4.5°C/sec / 4.0°C/sec
Temperature Uniformity	±0.25°C
Temperature Accuracy	±0.15°C
Gradient	6 Independent temperature zones
Detection Sensitivity	1 copy
Sensitivity	Detect differences as small as 1.5-fold in target quantities in singleplex reactions
Dynamic Range	10 logs of linear dynamic range
Footprint (W x D x H)	54.0 x 35.1 x 31.0 cm
Weight	20 kg

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