

# RT PCR 3097

## Real-Time PCR System



- ✓ Unique Design
- ✓ Innovative Technology

EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

An ISO 9001 Certified Company

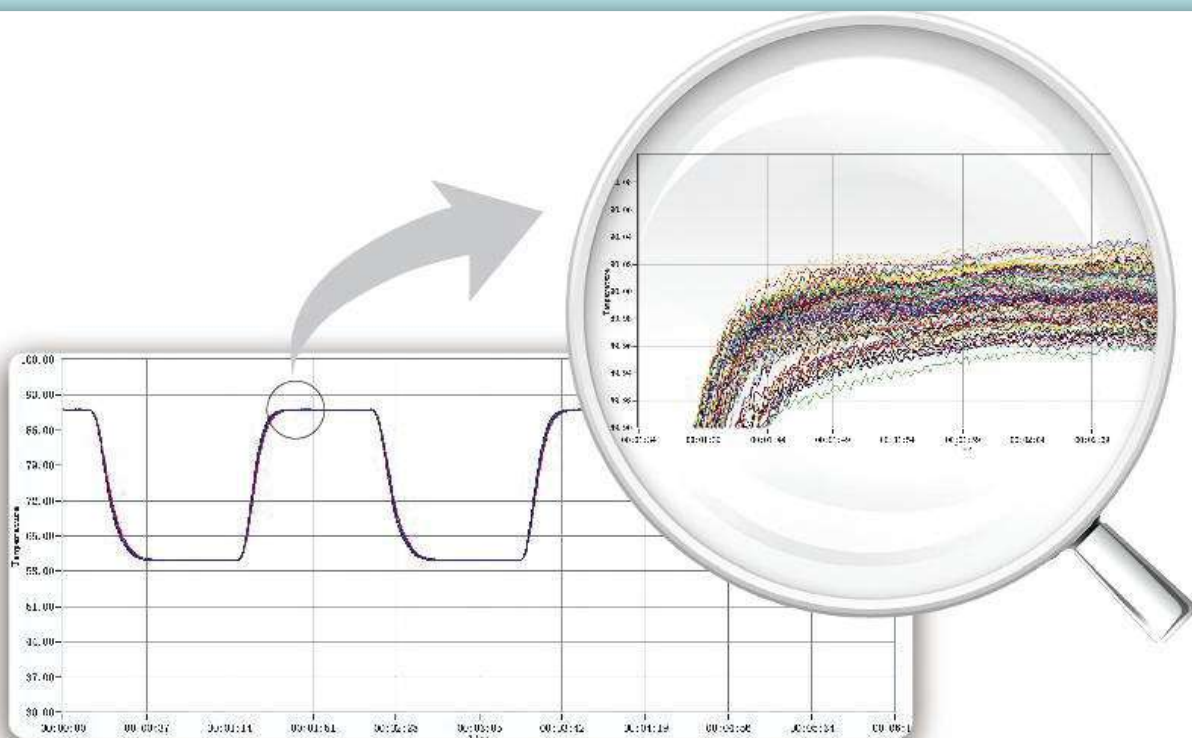
[www.analyticalgroup.net](http://www.analyticalgroup.net)

►► **Innovative dual 48/48 reaction blocks-increased efficiency and flexibility**

RT PCR 3097 dual 48/48 reaction blocks are controlled separately, like two independent instruments. With PCR 3097, two different assays can be tested simultaneously on a single instrument or a new assay can be started while another is running.

►► **Patented precise-temperature-control technology: well-to-well uniformity with an accuracy of  $\pm 0.1^{\circ}\text{C}$**

Benefit from its patented advanced temperature spot-to-spot compensation technology, The RT PCR 3097 temperature uniformity across 96 wells is to within a remarkable  $\pm 0.1^{\circ}\text{C}$ . This superior uniformity meets all your needs for highly precise studies, especially for High-Resolution Melting Curve (HRM) application



Partial enlarged plot of RT PCR 3097's temperature curve show temperature uniformity cross 96 wells within  $\pm 0.05^{\circ}\text{C}$

►► **Advanced fluorescence detection system-reliable, sensitive and calibration-free**

- The unique side-capture signal collection technology enhances fluorescence capture efficiency and eliminates signal noise, offering better detection sensitivity and smooth amplification curves;
- The improved optical system decreases instrument background ensuring better reproducibility;
- Long-lasting high-intensity LEDs which are reliable and maintenance-free;
- Negligible optical background resulting in no background calibration being required;
- Innovative optical light-path design eliminating edge effect and giving uniform fluorescence intensity for each tube, No ROX reference calibration is required;
- Instrument hardware calculates gain automatically during running. No gain setting is required;
- Professional optical filter combinations eliminate crosstalk between FAM, HEX, ROX, and CY5 channels. NO crosstalk calibration needed.

►► **Much faster-generates accurate results in less than 50 minutes**

Based upon the original analytical system, the latest RT PCR 3097 has improved upon its thermal design with a super-fast heating/cooling rate of up to 4.5°C/S.

►► **Professional multiplex detection channels-true 6plex real-time PCR**

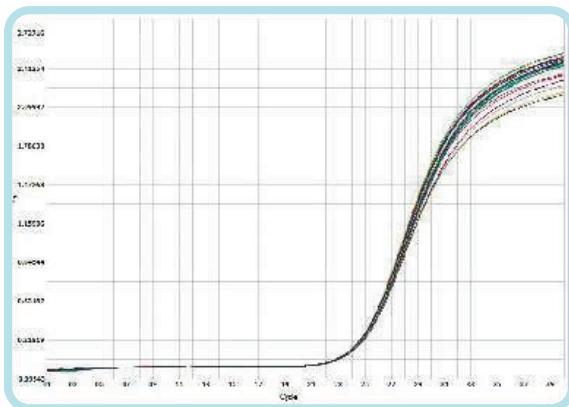
RT PCR 3097's 6 sets of excitation and emission filter combinations ensure 6-color multiplexing real-time reading capacity; you will enjoy a high flexibility in the choice of fluorescence dyes and detection format.

►► **Ideal approach to your HRM study-accurate, sensitive, no need for complicated temperature shift calibration**

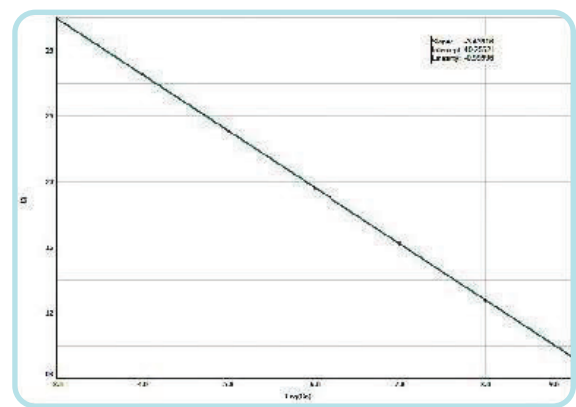
- Fast fluorescence detection mode completes gene scanning in 30mins; Advanced hardware design and software algorithms generate and precise data without the need for
- temperature shift calibration.

►► **Outstanding performance-reduces experimental error**

- Correlation coefficient: -0.999~ -1.000
- Sensitivity: detection of one starting template copy
- High resolution: easily discriminates between 500 and 1000 copies
- Reproducibility: CV<0.5%
- Broad dynamic range: 100~1010 copies



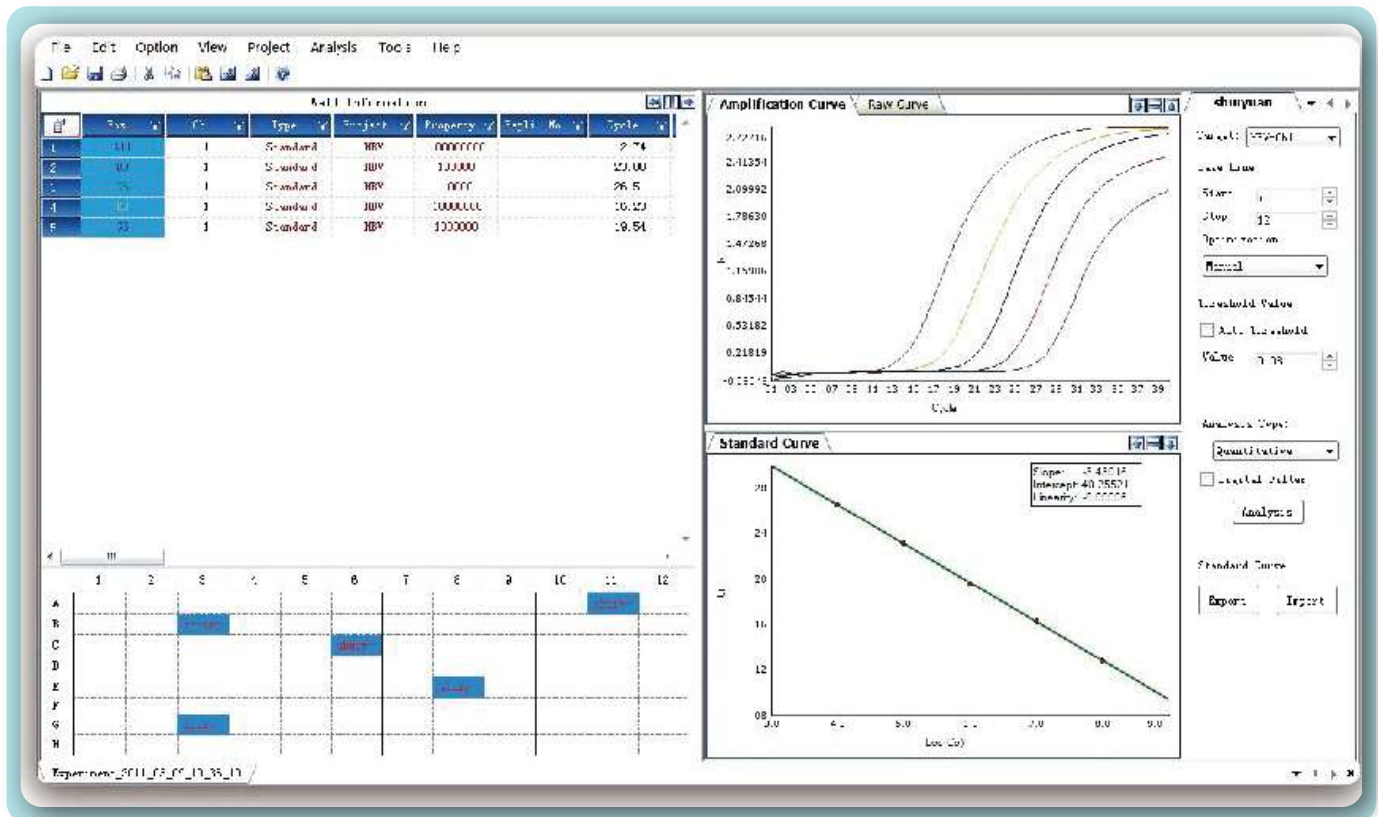
Reproducibility across 96 wells: CV<0.5%



Correlation coefficient: 0.99996

►► **Powerful yet easy to use multitasking software-excellent tools for high-quality data analysis**

- A broad range of analysis applications: Quantification/Qualification, Allelic Discrimination, Melting Curve analysis, Relative Quantification, HRM, Isothermal Amplification;
- Unique protocol manager, a flexible and powerful tool for the management of assay protocols;
- Unique rule function for easy result interpretation;
- Simple import and export functions enable integration with LIMS;



RT PCR 3097 multi-tasking software interface (analysis screen)

## ►► Support and service-we are committed to provide a better solution!

- Rapid customer and instrument support service;
- Highly stable and durable;high performance at an affordable price;
- Low noise,low power consumption,robust,compact and elegant;
- Open platform:supports all universal PCR reagents and plastics.

## ►► Specifications of the system

PRODUCT MODEL	RT PCR 3097
SAMPLE CAPACITY	96wells(dual 48/48 reaction module)
SAMPLE SIZE	10~50ul
CONSUMABLE	0.2ml PCR tubes,8-tube strips,48-well plates
PARALLEL RUNNING MODE	Dual reaction blocks(running 2 tests independently)
TEMPERTURE RANGE	4°C-100°C
MAX RAMP RATE	4.5°C/S
TEMPERTURE ACCURACY	+/-0.1°C
TEMPERTURE UNIFORMITY	+/-0.1°C
THERMAL CYCLING SYSTEM	Peltier-based system
TEMPERATURE CONTROL MODE	Tube control/Block control
LIGHT SOURCE	LED(maintenance-free)
DETECTOR	Photodiode detector
SENSITIVITY	1 copy
SCANING SPEED	3 - 4 Seconds (Multiple Scan mode)
REPRODUCIBILITY	CV<0.5%
CORRELATION COEFFICIENT	-0.999 to -1.000
LINEARITY RANGE	100~1010
RESOLUTION	Can discriminate between 500 copies and 1000 copies
EXCITATION	CH1 470nm CH2 530nm CH3 580nm CH4 630nm CH5/CH6 custom-made
EMISSION	CH1 510nm CH2 565nm CH3 620nm CH4 665nm CH5/CH6 custom-made
SOFTWARE APPLICATION	Absolute Quantification(AQ) ,Positive/Negative,Allelic Discrimination Melting Curve analysis(FRET),Relative Quantification(RQ) /Gene expression analysis,High Resolution Melting Curve analysis, Isothermal Amplification
HOT-LID	30~106°C(default 105°C,adjustable),electronic automatic hot-lid
POWER SUPPLY	230VAC,50HZ
POWER CONSUMPTION	850VA
COMPUTER REQUIREMENT	1GB RAM,CPU1.5GHz
DIMENSIONS	38cm×52cm×25cm(W×D×H)
WEIGHT	18kg
OPERATION SYSTEM	Windows XP,Windows Vista,Windows7
COMMUNICATION	RS232,USB



## ►► Regulatory compliances



## ►► Corporate Social Responsibility

Analytical Foundation is a Nonprofit Organization (NGO) found for the purpose of:



# Analytical Foundation

1. Research & Innovation Scientist's awards / QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at [info@analyticalfoundation.org](mailto:info@analyticalfoundation.org)

2. Improving quality of life by offering YOGA Training courses, Work shops / Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

## ►► Reach us @



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