

# SLAN<sup>®</sup> Real-Time PCR System



Shanghai Hongshi Medical Technology Co., Ltd

[www.hongshitech.com](http://www.hongshitech.com)



## About Hongshi Tech

Shanghai Hongshi Medical Technology Co., Ltd is a high-tech biology technology company in China. We specialize in the design, manufacture and application of hi-tech products for life science applications, such as Real-Time PCR system.

Hongshi has many years of experience and technical know-how with these products, the features and performance of which are continually enhanced and improved.

Hongshi's well-known brand the SLAN<sup>®</sup> Real-Time PCR System obtained its SFDA registration certificate and also obtained its international CE marking certification. Because of the SLAN's extremely high performance, by comparison with market leading products, our users include many hospitals and Centers for Disease Control, universities and research institutes all over China. From 2005, SLAN entered international markets.

At present, the SLAN Real-Time PCR System has been distributed in Asia and Europe already. Depend on our high-quality products and comprehensive service, SLAN has been entered into life science research, public health, epidemiology, food safety, and livestock etc related fields.

Hongshi's technical support and its system enabling rapid after-sales service gives total customer support and maintains the quality principles of the company: Service first and priority to innovation.

## About SLAN<sup>®</sup> Real-Time PCR System

The SLAN<sup>®</sup> Real-Time PCR enables the performance of Real-Time PCR with rapid cycling of up to 48 samples. Peltier technology is used by the system for the PCR process, and the fluorescence signal is detected through a high-sensitivity system making the process of detection more accurate, stable and highly repeatable.

The SLAN<sup>®</sup> Real-Time PCR System divides the process of an assay into three



steps: Template Editing, DNA Amplification, and Result Analysis. The operation of the whole Real-Time PCR process is fast, flexible and easy.



## Features of the SLAN<sup>®</sup> Real-Time PCR System

### Precise Temperature Control System

- The SLAN<sup>®</sup> system adopts Peltier technology which can accurately and quickly control increases and decreases of temperature with a precision of  $\pm 0.1^{\circ}\text{C}$  and features long service life, no noise and no pollution, etc.;

- Multiple-point temperature control technology ensures the uniformity between different wells. The temperature correction technology guarantees the accuracy of temperature and thus ensures the accuracy of assay result;

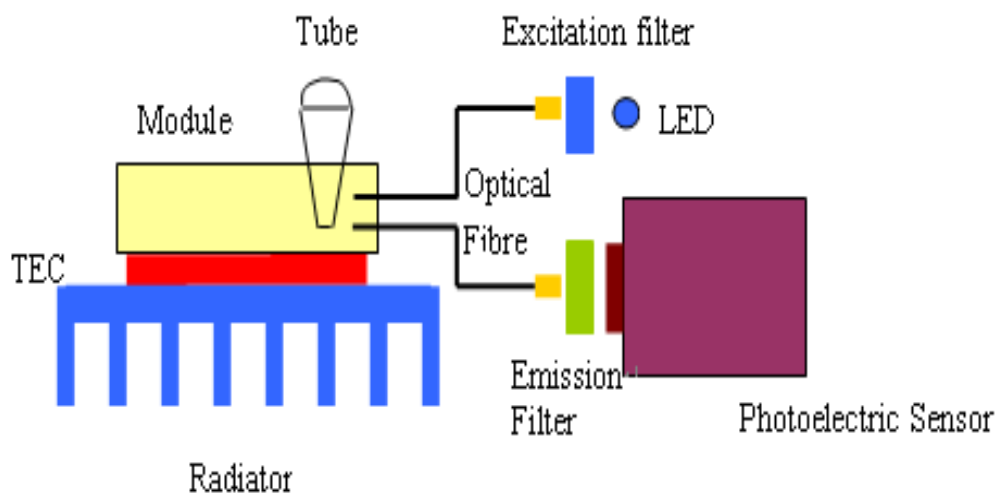
- PCR tube temperature-control technology guarantees the accuracy of actual temperature of reagent in the tube and enables the SLAN<sup>®</sup> to easily adjust for different reactions using different volumes

	1	2	3	4	5	6	7	8	9	10	11	12
A	89.82	89.88	89.92	89.94	89.94	89.92	89.93	89.92	89.91	89.89	89.88	89.87
B	89.96	90.04	90.04	90.03	90.04	90.05	90.06	90.04	90.03	90.05	90.00	89.96
C	89.97	90.02	90.07	90.04	90.03	90.05	90.07	90.09	90.07	90.08	90.08	90.01
D	89.97	90.01	90.04	90.00	90.02	90.02	90.05	90.05	90.04	90.04	90.02	89.98

The sample well`s temperature on 90<sup>o</sup>C

## Sensitive Photoelectric Detection System

- High sensitivity photoelectric detector with no background noise which is fast and stable;
- Lifetime maintenance-free ultra-bright LED cold light source with a large signal value and high stability;
- Unique optical fiber conduction technology that greatly improves fluorescence collection efficiency and avoids fluorescence interference between neighboring tubes;
- The system automatically selects best gain value for each tube without the need for user configuration. The SLAN® has an extremely broad measuring range for fluorescence;
- Extremely high detection sensitivity with an extremely low fluorescence background value. It's not necessary for users to make optical correction or background correction;
- Highly optimized filter combination giving rise to so little crosstalk that it can almost be ignored. The SLAN software subsequently eliminates any slight interference values that occur.



Photoelectric detection system structure

## Unique Electronic Automatic Hot Lid System

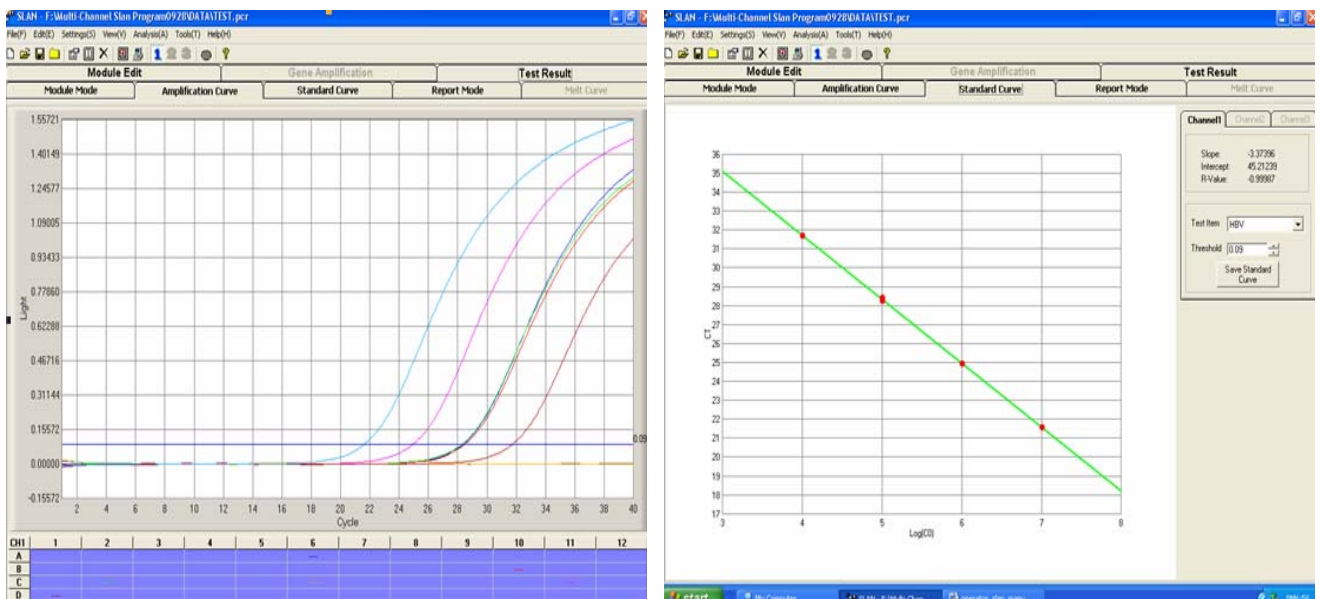
- Flexible heating technology ensures uniform hot lid temperature;
- The electronic automatic hot lid has an adjustment function for different 0.2ml reaction tubes to ensure even tube pressure;
- Once the assay starts, the hot lid has automatic locking function to prevent assay failure following accidental opening.

## Wider Linearity Range, High Sensitivity

- Linearity Range  
The linearity range of the SLAN can be from  $10^0 \sim 10^{10}$  copies.
- Sensitivity  
The minimum detected definition can be 1 copy.

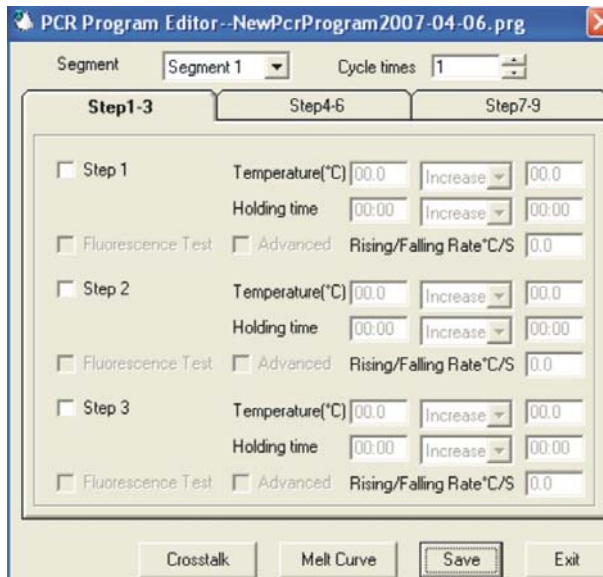
## The Powerful SLAN Software

### Perfect Repeatability



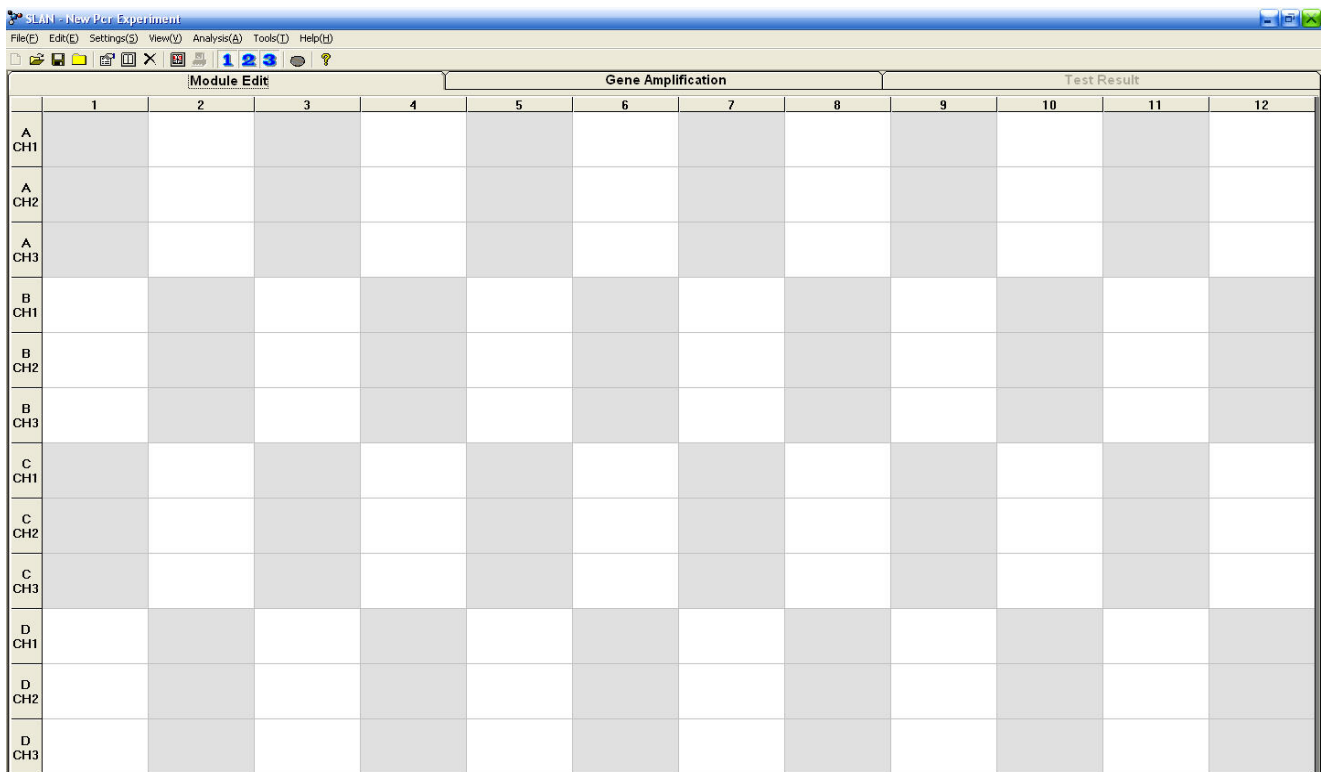
The above figure is the expansion curve and standard curve of the standard quantitative reagent dilutions respectively;  $2 \times 10^7$  copies/ml,  $2 \times 10^6$  copies/ml,  $2 \times 10^5$  copies/ml,  $2 \times 10^4$  copies/ml. 20 replicates were run at  $2 \times 10^6$  copies/ml and gave a CV of 0.12%. The correlation coefficient (R) for the above is -0.99988.

## Diversified Programming Method



- Each programme has up to 9 segments;
- Each segment has up to 9 steps;
- The SLAN can therefore meet any testing requirements.

## User-friendly English Interface

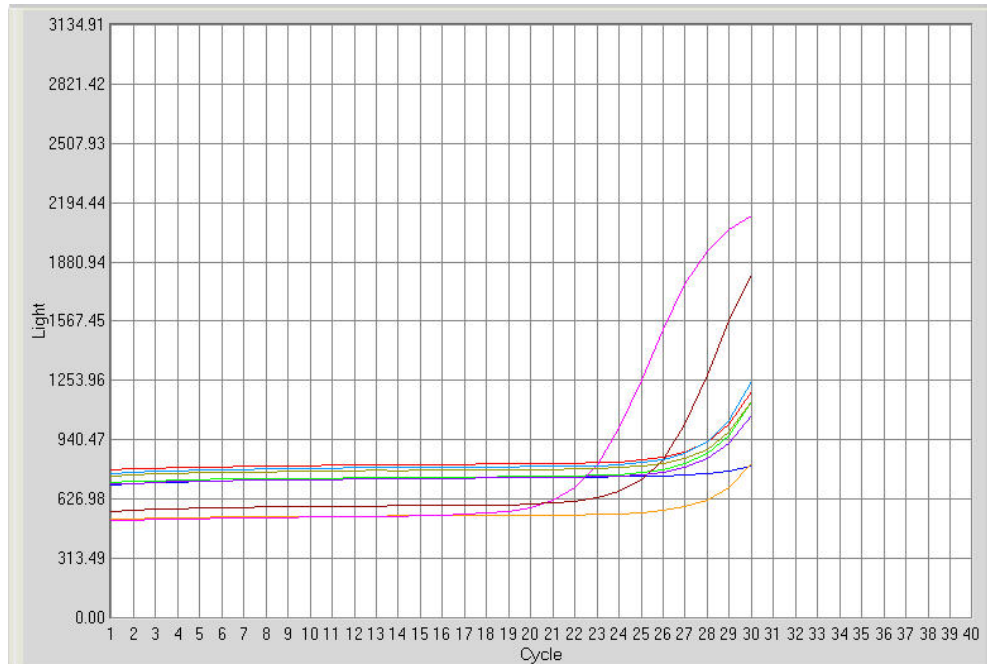


	Module Edit			Gene Amplification						Test Result		
	1	2	3	4	5	6	7	8	9	10	11	12
A CH1												
A CH2												
A CH3												
B CH1												
B CH2												
B CH3												
C CH1												
C CH2												
C CH3												
D CH1												
D CH2												
D CH3												

- English interface makes the SLAN easy to operate.



## Visual Results



- With real-time monitoring, the result is accurate, reliable and subjective judgments are avoided.

## Multi-channel Detection Function

- Highly optimized filter combination, influence of crosstalk can almost be ignored;
- The SLAN system can detect three channels simultaneously.

## Fully-closed Detection Process

- The SLAN system operates in a completely sealed environment. Opening the tube is unnecessary and there is no risk of contamination.

## Other Functions

- Power-off protection;
- Automatic saving result;



- Export of result;
- Real-time data display;
- Quantitative and qualitative analysis;
- File encryption;
- Automatic baseline optimization;
- Digital filtering;
- Search function;
- Report sheet print and edit;
- Melt curve function;
- Manual option for baseline adjustment.

## Application Of The SLAN<sup>®</sup> Real-Time PCR System

### Certificates Of The SLAN<sup>®</sup> Real-Time PCR System

ZERTIFIKAT ◆ CERTIFICATE ◆ CERTIFICADO ◆ CERTIFICAT



Product Service

**CERTIFICATE**  
No. Q1N 06 07 59665 001

**Holder of Certificate:** Shanghai Hongshi Medical Technology Co., Ltd.  
No.48A, Yiminhe Road  
200437 Shanghai  
PEOPLE'S REPUBLIC OF CHINA

**Facility(ies):** Shanghai Hongshi Medical Technology Co., Ltd.  
No.48A, Yiminhe Road, 200437 Shanghai, PEOPLE'S REPUBLIC OF CHINA

**Certification Mark:** 

**Scope of Certificate:** Design and Development, Production and Distribution of Real-Time Quantitative PCR Detection System

**Applied Standard(s):** ISO 13485:2003  
Medical Devices - Quality Management Systems - Requirements for regulatory purposes

The Certification Body of TÜV SÜD Product Service GmbH certifies that the company mentioned above has established and is maintaining a quality system which meets the requirements of the listed standard(s). See also notes overleaf.

**Report No.:** 70198648901

**Valid until:** 2009-07-31

**Date:** 2008-08-11   
Rainer Krümme

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TÜV Product Service GmbH  
 TÜV SÜD Gruppe - Zertifizierstelle  
 Ridlerstr. 65 - 80339 München  
 Germany



Akkreditiert durch  
Zuständige der Länder  
für Gesundheitsschutz  
bei Arzneimitteln  
und Medizinprodukten  
ZLG-ZQ-999.98.12-46

ZERTIFIKAT ◆ CERTIFICATE ◆ CERTIFICADO ◆ CERTIFICAT



Product Service

**EC-Attestation of Conformity**  
No. E8 06 11 59665 002

**Holder of Certificate:** Shanghai Hongshi Medical Technology Co., Ltd.  
No.48A, Yiminhe Road  
200437 Shanghai  
PEOPLE'S REPUBLIC OF CHINA

**Name of Object:** Electronic measuring equipment  
SLAN Real-time Quantitative PCR  
Detection System

**Model(s):** SLAN

**Description of Object:**

Rated voltage:	230V AC
Rated frequency:	50Hz
Rated power input:	500W
Protection class:	I

**Tested according to:** EN 61326:1997/A3:2003

This EC-Attestation of Conformity is issued according to the Directive 89/336/EEC relating to electromagnetic compatibility on a voluntary basis. It confirms that the listed equipment complies with the principal protection requirements of the EMC directive and applies only to the sample and its technical documentation submitted to TÜV SÜD Product Service GmbH for testing and certification. See also notes overleaf.

**Test report no.:** 701986489test-01

**Date:** 2008-11-20 

**CE** After preparation of the necessary technical documentation as well as the conformity declaration the required CE marking can be affixed on the product. Other relevant directives have to be observed.

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TÜV SÜD Product Service GmbH - Zertifizierstelle - Ridlerstrasse 65 - 80339 München - Germany





## Parameters Of The SLAN<sup>®</sup> Real-Time PCR System

PRODUCT MODEL	SLAN
SAMPLE CAPACITY	48×0.2 ml TUBES
CHANNELS	3 Channels
EXCITATION FILTERS	470nm, 530nm, 630nm (585nm option available instead of 630nm)
DETECTION FILTERS	530nm, 565nm, 665nm (620nm option available instead of 665nm)
FLUOROPHORES DETECTED	FAM, SYBR Green, VIC, HEX, JOE, TET, ROX, TEXAS RED, CY5
TEMPERTURE RANGE	4°C-99°C
HEATING RATE (MAX)	3°C/S
COOLING RATE (MAX)	2°C/S
TEMPERTURE ACCURACY	±0.3°C
TEMPERTURE UNIFORMITY	±0.3°C
OPERATING SYSTEM	Win2000/XP professional
POWER SUPPLY	220-240 VAC 50/60Hz
ENERGY CONSUMPTION	500VA (Computer system excl.)
DIMENSIONS (W×D×H)	38cm×50cm×26cm
WEIGHT	15kg (computer system excl.)
LICENSE	SFDA, CE, TUVISO13485:2003

## Products Application

- Pure science studies;
- Analysis of gene expression;
- Analysis of genotype;
- Clinical applications;
- Diagnosis of pathogens;
- Tumor typing/drug resistance assessment;
- Genetic screening;
- Food hygiene inspection;



- Food and livestock import/export testing;
- Food safety assessment;
- Public health safety and epidemiology.

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