

# ***SCI Digital***

***Fully Automated  
Digital PCR System***

## Reasons to choose SCI Digital

### ✓ Fully integrated and automated

4 in 1: sample loading, droplet generation, PCR amplification, and signal reading  
True whole process automation eliminates manual errors

### ✓ Compact size, light weight

Bench space 0.2m<sup>2</sup>, only 453mm wide, 50kg  
Optimal for international transportation, installation, and maintenance

### ✓ High compatibility with market PCR Mix

Preset microchambers on chips, compatible with market PCR Mix  
Facilitates fast and efficient assay development

### ✓ Highly stable micro-droplets

Solidified-oil physical isolation technology  
Avoids droplets from rupture or fusion, effective droplet rate ≥95%

### ✓ High signal quality

Glass-based microfluidic chips  
Uniform reactions, good light transmittance

### ✓ Farewell to sample pooling

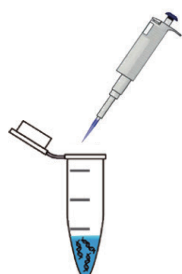
Minimum 1 sample/run  
Superb flexibility minimizing consumable waste

### ✓ Featured functions

Upgradable with digital isothermal amplification function, and 2<sup>N</sup> Exponential Ultra-Multiplex Technology  
Comes with BioReporter automatic report generation function



## Extremely Easy Workflow



### dPCR Master Mix

12- or 8-tube strips,  
single tubes



### SCI Digital dPCR

Integration of automatic sample loading,  
droplet generation, PCR Amplification,  
and signal reading



### Data Analysis

Raw droplet image, data tracking,  
automatic report generation



## SCI Digital

### Product Specification

Throughput	1~12 Samples
Sample volume	25~30μL
Droplet number	> 20,000
Fluorescence channels	2/3/4/5 channels FAM, HEX, ROX, Cy5, Quasar705
Chip scanning time	Single channel: < 1 min/sample
Optical sensor	CMOS
Light source	LED
Size	W 453mm, D 512mm, H 497mm
OS interface	English, Chinese



### Technical Specification

Sensitivity	0.01%
Dynamic range	5logs
Effective droplet ratio	≥ 95%
Droplet uniformity	> 99%
Droplet uniformity	± 10%

### Droplet Generating Chip

Chip 20K-B	20,000 droplets
Customized chip	80,000 droplets



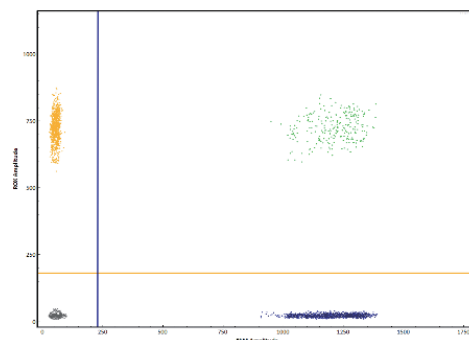
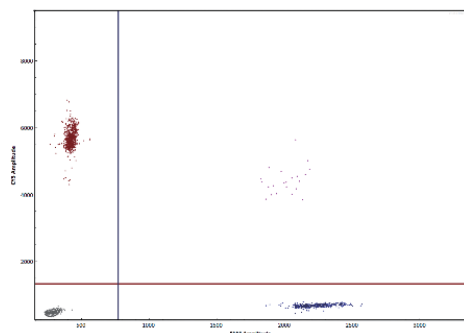
### Digital PCR Universal Kits

Composite	Components
Reagents	PCR Mix (enzymes, buffer), oil phase A & B
Consumables	Chips, 12-tube strips & caps, pipette tips

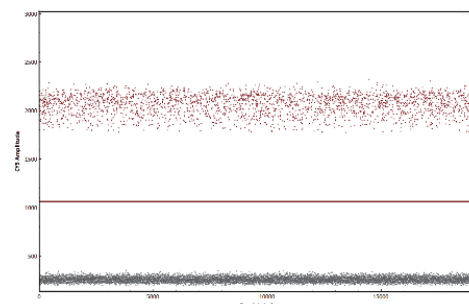
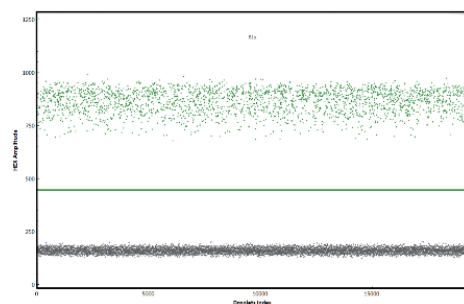


## Performance

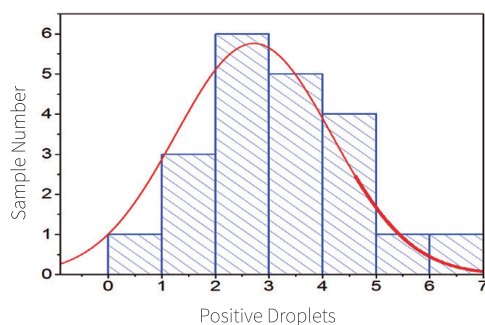
✓ The fluorescence channels are clearly distinguishable



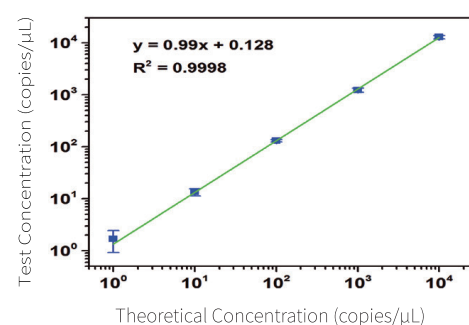
✓ High signal-to-noise ratio and good signal repeatability



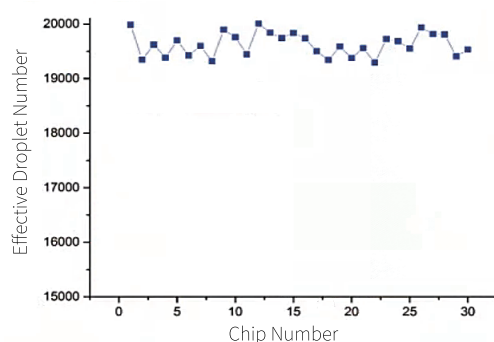
✓ Sensitivity



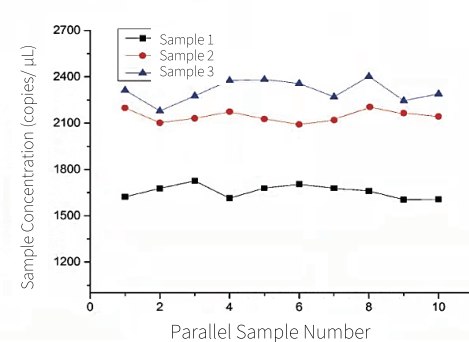
✓ Accuracy and linear range



✓ Effective droplets



✓ Repeatability, CV



## Multiple models to choose from

Model	Fluorescence Channels	Features
SCI T200	FAM/HEX	For basic research. Excellent cost-effectiveness. Upgradeable channels.
SCI T300	FAM/HEX/ROX	For most research. High cost-effectiveness. Upgradeable channels.
SCI T400	FAM/HEX/ROX/Cy5	For broad research. Ultra-Multiplex compatible. Upgradeable channels.
SCI T500	FAM/HEX/ROX/Cy5/Quasar705	Multiplex and Ultra-Multiplex capabilities.

## Applications



### Liquid Biopsy

- Rare mutation detection
- Copy number variations
- Methylation screening
- MRD
- Drug resistance monitor



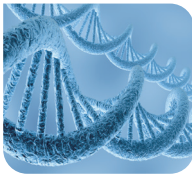
### Infectious Diseases

- Multiplex respiratory test
- Multiplex V. vulnificus test
- Multiplex sepsis test
- Pathogen genotyping



### Reproductive Genetics

- Trisomy 21 detection
- SMA detection
- RhD- blood type detection
- Deafness gene detection



### Biopharmaceuticals

- AAV titer quantification
- QC for stem cells, Car-T cells, NK cells, etc.
- Gene editing quantification and QC
- Host cell residual DNA detection
- RNA vaccine gene variation quantification



### Reference Materials

- Nucleic acid reference material quantification
- Enterprise reference material quantification
- Sequencing library quantification
- Nucleic acid QC material quantification



### Environment

- Water microorganisms
- Livestock pathogens
- Geothermal archaea



### Agriculture

- Molecular breeding
- Crop pathogen control
- Aquaculture pathogen
- Animal disease prevention



### Food Safety/Inspection

- Transgenic crops/foods
- Imported & exported food pathogens
- Animal-derived food detection
- Residual microorganism tracing





## Credentials







# Leading life science and molecular diagnostics into digital era

## Shanghai Turtle Technology Co., Ltd.

Turtle Technology is dedicated to leading life sciences and molecular diagnostics into digital era. We have been granted the National Gene Testing Technology Application Demonstration Center and the nation's first Digital PCR Metrological Evaluation Certificate. We have introduced series of digital PCR systems, achieving full-chain technology innovations of genetic testing instruments, chip consumables, Ultra-Multiplex technology, and ultra-high specificity polymerase for molecular diagnostics.

Product Type	Model	Features
Digital PCR Systems	 SCI Digital PRO	<ul style="list-style-type: none"><li>◆ 4 in 1, fully automated &amp; integrated</li><li>◆ 6+1 fluorescence channels</li><li>◆ 24 sample parallel processing</li><li>◆ Dual independent PCR thermal modules</li><li>◆ Ultra-Multiplex PCR quantification system</li></ul>
	 SCI Digital	<ul style="list-style-type: none"><li>◆ 4 in 1, mini, fully automated &amp; integrated</li><li>◆ 2/3/4/5 fluorescence channels</li><li>◆ NMPA registered</li><li>◆ CE certified</li></ul>
	 BioRuler	<ul style="list-style-type: none"><li>◆ 4 in 1, mini, fully automated &amp; integrated</li><li>◆ Designed for accurate quantification</li><li>◆ Upgradable to 2/3/4/5 fluorescence channels</li><li>◆ Highly cost-effective: CNY 149,000</li></ul>
Taq DNA Polymerase	 SNUPP Polymerase	<ul style="list-style-type: none"><li>◆ Ultra-High Specificity</li><li>◆ Precisely identifies single-base mismatch</li><li>◆ Probe, electrophoresis, and dye methods</li><li>◆ Suitable for conventional PCR, qPCR, and dPCR</li></ul>

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