

# CS-6400

Auto-Chemistry System



Turning a hill of productivity into a mountain of possibility



## Modules Integration

Intelligent and Advanced Chemistry System

### Specification

System Type	Random access, fully automatic, discrete, STAT priority
Throughput	Constant speed 6400T/H colorimetric (integration of 4 modules) Max. ISE throughput up to 960T/H
Light Source	Long life halogen lamp
Wavelength	340~800nm, 13 wavelengths
Analysis Method	End-point, kinetics, fixed-time, etc.
Calibration Method	1 point method, 2 point method, multiple point linear method, non-linear method
Probe	Independent sample probes, reagent probes, automatic liquid level detection, probe liquid level tracing and clot detection function
Rinsing Mechanism	Probe inner wall high pressure rinsing
Mixing Mechanism	2 sets independent mixers for each module ensure sufficient reaction
Reaction Cuvette	330 new type reaction cuvettes for each module
Temperature Control	The temperature of reaction disk incubation bath is $37^{\circ}\text{C} \pm 0.1^{\circ}\text{C}$
Reagent Position	134 reagent positions for each module, with continuous refrigeration
Sample Volume	1.5 $\mu\text{l}$ ~30 $\mu\text{l}$ , 0.1 $\mu\text{l}$ increment
Reagent Volume	15 $\mu\text{l}$ ~300 $\mu\text{l}$ , 1 $\mu\text{l}$ increment
Reaction Volume	Minimum reaction volume 150 $\mu\text{l}$



Certified to  
ISO 9001:2008 and ISO 13485:2003

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• Specifications subject to change without notice.

20170518

# DIRUI

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**DIRUI**

## **Modules Integration**

Achieve continuous working of Auto-Chemistry Analyzer

Modules Integration ---- Universal High-end Design  
Flexible Modules Integration PLUS Independent Module Control

**Safety High-efficiency Flexibility Independency**

Representing the highest level of Chemistry Analyzer technology

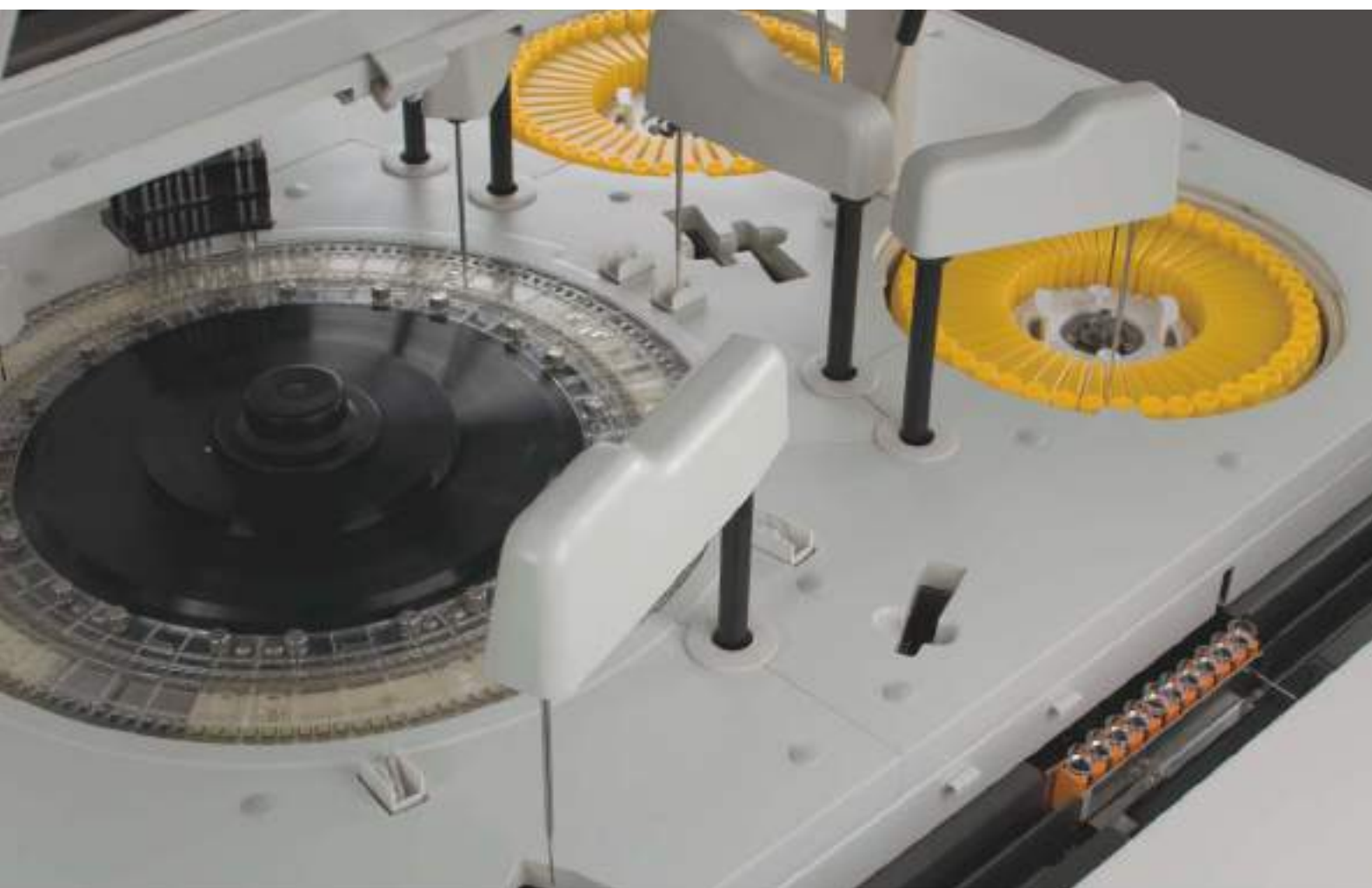


The throughput of single module can achieve 1600 tests/h.

Four modules integration with maximum throughput of 6400 tests/h, perfectly meeting the demands of high-workload hospitals.

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## Large Capacity Sample Stage and Track

- Auto-track loading contributes to great efficiency and productivity. Large capacity sample stage can hold as much as 30 sample racks (300 samples). STAT function providing quick access for emergent samples.



## Advanced Photometry System

### Holographic concave flat field grating, rear spectrophotometry

- Cluster-condensing light(point light source) technology to realize microvolume analysis coupled with less reagent consumption
- Air cooling is adopted for extending the life span of Long Life Light Source
- Perfect position design ensures no signal attenuation and interference
- Anti-ambient light interference contributes to accurate result delivery



## Stable Temperature Control System

### A. Cooling System

- Advanced postposition semi-conductor ensures direct heat releasing. Disks water cooling to ensure stable temperature and easy maintenance



### B. Constant Temperature Device of Reaction Cuvette

- Recycling water of constant temperature, automatically changing water and adding defoamer. Reaction cuvettes are immersed into warm water which enables cuvettes' even heating. The ambient temperature influence is effectively avoided and without the need of reagent pre-heating
- PID thermostat technology ensures  $37^{\circ}\text{C} \pm 0.1^{\circ}\text{C}$

## Accurate Sampling System

### Probe:

- Polished probes with nano processing technology, reducing the cross-contamination effectively
- Automatic liquid level detection: the probes automatically detect the liquid level and stop descending ensuring the probes enter into liquid at perfect depth and reducing liquid suspension
- Collision detection function, self-resetting, automatic sample and reagent pipetting
- Intelligent clog and clot detection: detecting the status of probe clog and the existence of clot
- High pressure rinsing function, enhancing pipetting volume accuracy. High pressure rinsing for inner wall of 5 probes, water fall rinsing for outer wall
- Alarm when there is inadequate reagent volume and slew to same reagent to ensure continuous analysis. Automatic remaining volume detection and available test amount display.



### Syringe:

- Long life high-precision ceramic piston ensures high precision of sampling, low maintenance cost
- Water degassing technology: The analyzer has special degassing device to remove the air dissolved in the tube system, which ensures quick, accurate and microvolume pipetting.

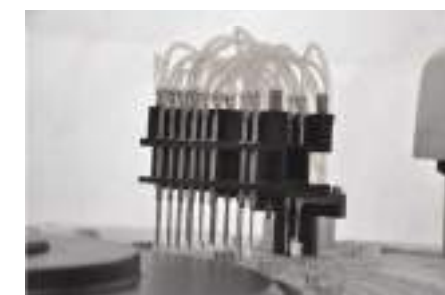
## High-Efficient Rinsing System

### A. Automatic Cuvette Rinsing

- 8 stops 11 steps rinsing by warm water ensures complete cleaning

### B. Probe Inner Wall Rinsing

- Vacuum draining liquid, detergent and warm water high pressure rinsing
- Carryover contamination rate  $\leq 0.1\%$ , ensuring best cleaning status



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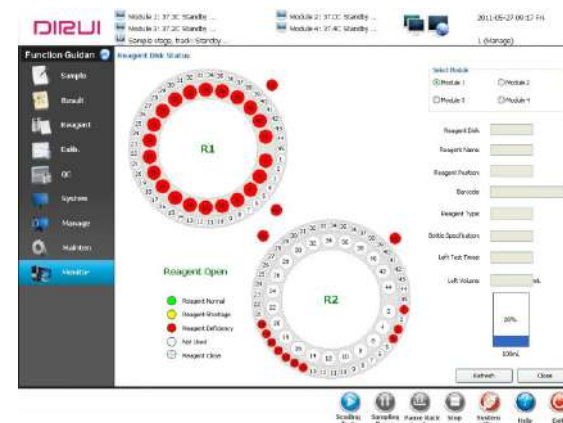
## Calibration and QC

- Linear and non linear calibration
- 9 types of calibration curve fitting formulas to meet different items' analysis demands
- Each item can use 10 different levels' calibrator at most
- With calibration tracing function, depict the change trend chart of calibration K Value helps to reduce system error
- Daily QC and monthly QC ensure the instrument is working at the best analysis condition
- QC rule: default as Westgard multi rules
- QC chart: depict and print the relevant L-J chart, Cumulative automatically
- Out of control reason and original data record function, which complies with the lab QC management



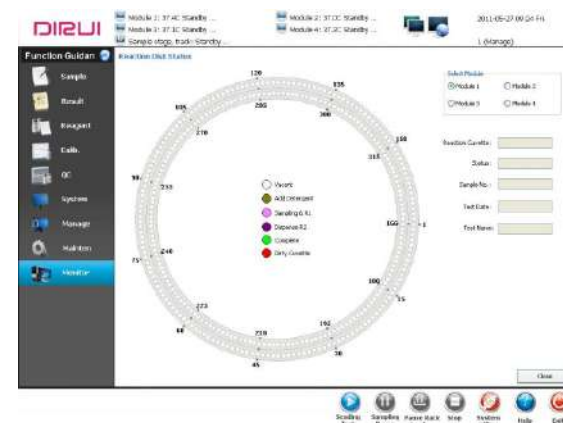
## Operating Software

- English version graphical operating software, user friendly operation and interface
- Real-time online help system reduces downtime
- Easy software operation, advanced function, consistent with the use requirement of clinical test
- Multiple self-monitoring functions ensure the intelligentize of analysis process
- Data dictionary and information input which is convenient and efficient
- Multiple data query, statistic and report printing function
- Same patient information will be memorized by the software automatically and input automatically, all the things will be completed by one button
- Multiple report formats, user define modification is supported



## Monitoring and Calculating Function

- Linear limit over, reference limit over, substrate depletion, antigen surplus, no reaction equilibrium point checking function
- Serum index checking function avoids interference from hemolysis, lipemic, icteric
- Against cross-contamination program, avoid interference from different reagents, samples and reaction cuvettes
- Instrument analysis alarm hierarchical handling to arrange the job sequence by priorities
- User permission hierarchical management to enhance system security



## Barcode Scanning

Automatic routine sample barcode scanning ensures accurate sample information recognition  
Automatic reagent barcode scanning enables accurate, fast reagent registration



## Easy to Use Design

Reagent Disks  
Newly designed slop angle of reagent disks enhancing reagent utilization ratio and saving cost  
Flexible Sample Positions  
Φ12~16 original tubes and sample cups are available



## Advanced Analysis System

High precision instrument, high quality reagents, Control and Calibrator with complete traceability system contribute to advanced analysis system

## ISE Module(Optional)

- Independent ISE module, up to 2 test units each module
- Indirect simultaneous measurement of  $K^+$ ,  $Na^+$ ,  $Cl^-$

