

AUTOMATED BIOCHEMISTRY ANALYZER

Model M800

Specification:

- System Type : Random access, fully automatic, discrete, STAT priority
- Throughput : Constant speed 900T/H for colorimetric test, 450 T/H for ISE
- Light Source : Long life halogen lamp
- Wavelength : 340~800nm, 12 wavelengths
- Analysis Method : End-point, kinetics, fixed-time, etc.
- Calibration Method : 1 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 independent mixers ensure sufficient reaction
- Reaction Cuvette : 160 new type reaction cuvettes
- Temperature Control : The temperature of reaction disk incubation bath is 37°C ± 0.1°C
- Sample Tube : 140 sample positions, supporting multiple tubes and sample cups
- Reagent Position : 2 compartments, 132 reagent positions totally, with continuous refrigeration; supporting 4 kinds of reagent test.
- Sample Volume : 1.5 µl ~ 35 µl, 0.1 µl increment
- Reagent Volume : 15 µl ~ 350 µl, 1 µl increment
- Reaction Volume : Minimum reaction volume 120 µl ~ 450 µl



ISO 13485 Quality
management system

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A. Cooling System

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

B. Constant Temperature Device of Reaction Cuvette

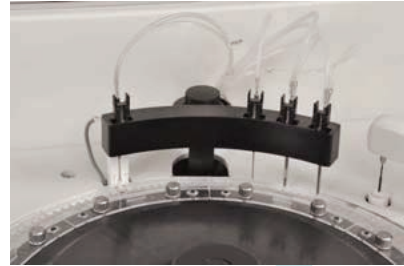
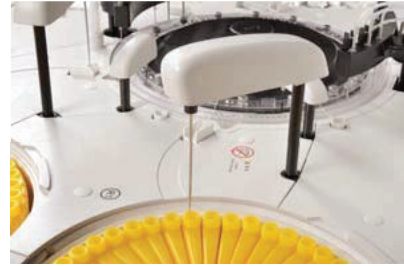
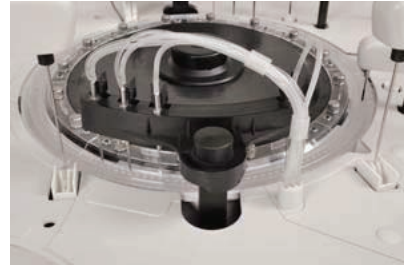
- Recycling water of constant temperature, automatically changing water and adding defoamer. Reaction cuvettes are immersed into warm water which heats the cuvettes evenly and reduces ambient temperature influence, no need of reagent pre-heating.
- PID thermostat technology ensures 37°C , $\pm 0.1^{\circ}\text{C}$ variation of temperature control.

Accurate Sample/Reagent Pipetting Mechanism

- **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 stop 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 3 probes, water fall rinsing for outer wall

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.
- The analyzer senses the remaining volume of sample and reagent and the number of test items automatically and alarms when the samples and reagent are not enough to ensure continuous analysis.



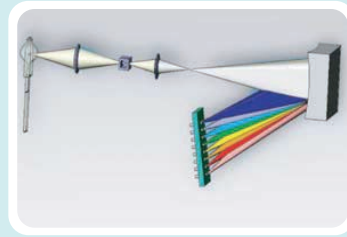
High-Efficient Rinsing System

A. Automatic Cuvette Rinsing

- 8 stops 12 steps rinsing by warm water ensures complete cleaning

B. Inner Wall Rinsing of probe

- Draining liquid by vacuum, detergent and warm water high pressure rinsing.
- Carryover contamination rate $\leq 0.1\%$, ensures best cleaning status



Advanced Photometry System

Holographic concave flat field grating, rear spectrophotometry

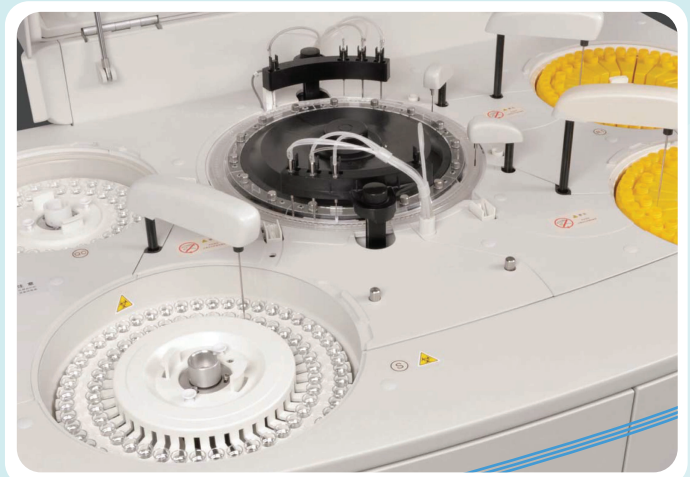
- Cluster-condensing light (point light source) technology to realize microvolume analysis, less reagent consumption.
- Long life light source adopts circulating water cooling method
- Light source with best position design, no signal attenuation, strong anti-interference.
- Anti-ambient light interference to get accurate result

Barcode Scanning

- Automatic routine sample barcode scanning, accurate sample information recognition.
- Automatic reagent barcode scanning, accurate, fast reagent information acquisition

ISE Module (Optional)

- Indirect simultaneous measurement of K^+ , Na^+ , Cl^-
- Throughput of 450 T/H
- Long life electrodes



User-friendly Design

Reagent Disks:

- Newly designed slope angle of reagent disk; Large capacity of reagent positions
- Two disks allow 132 items to be tested at most
- Flexible Sample Positions: sample cups and original tubes with the diameter of 12-16mm are available.

Advanced Analysis System

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

Calibration and QC Function:

- Linear and non linear calibration; With manual and automatic calibration function available to select.
- 9 types of calibration curve fitting formulas to satisfy different item analysis requirement
- Each item can use 6 different levels calibrator at most
- With calibration tracing function; Change-trend chart of K value helps to reduce system error
- Monthly QC ensure that 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 record function, which complies with the lab QC management.

Operating Software

- English version graphical operating software, user friendly operation interface
- Real-time inline 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 Calibration Function

- Linear limit over, reference limit over, substrate depletion, antigen surplus, no reaction equilibrium point checking function.
- Serum checking function avoids interference from hemolytic, lipemic, icteric reagent.
- 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.

