

**BS-400** Chemistry Analyzer





- Discrete, random access, fully automated
- 400 tests per hour, up to 640 tests per hour with ISE
- Up to 77 onboard chemistries and 4 ions
- Refrigerated reagent compartment
- Onboard capacity of 90 sample positions
- Automatic probe cleaning, liquid level detection, clot detection, collision protection in both vertical and horizontal directions
- 8-step auto washing system
- 12 wavelengths: 340~800nm
- Automatic dilution for abnormal sample
- Internal bar code reader (optional)
- Bi-directional LIS interface





Convenient to use: real-time monitoring of working status, emergency tests are indicated by the LED display.





Clot detection: to avoid incorrect reaction at the very beginning of the reaction process.









# Multi-functional reagent probeInterior and exterior probe washing

- Liquid level detection
- Collision protection
- Inventory monitoring Probe depth adjusted automatically



# Multi-functional sample tray

- 90 sample positionsCan be programmed into 5 virtual
- sample disks
- Primary tubes and various sample cups can be used
- Automatic dilution of high concentration samplePre-dilution for abnomal sample
- Internal sample bar code reader (optional)

# Reaction tray

- Test sequence optimization to reduce carry-over
- Total reaction volume as low as 150µL
  - Contains 90 reaction cuvettes
  - Maintenance free heating system



#### Multi-functional sample probe Interior and exterior probe washing

- Liquid level detection
- Clot detectionCollision protection
- Probe depth adjusted automatically
- Sample volume as low as 2.0µL





# **BS-400** Chemistry Analyzer

# Comprehensive and sophisticated software program

- Serum indices detection function
- Intelligence of extending the linearity range for enzyme tests automatically
- Multi-point calibration: up to 10 points
- Auto rerun: in repeating/increasing /decreasing mode
- Power-off memory protection: in case of emergency shutdown, the system quickly stores all the current information. When powered on again, it will carry over unfinished tests without
  - requesting again
- Reaction trend graph of patient's history records
- Comprehensive indications for out-of-control results and detailed causation records
- Automatic alarm during running process with explanations displayed
- Optimum test sequence setting program to avoid carry-over









#### Dynamic and real-time display of running status

- Running status of reagent tray, sample tray and reaction tray
- Real-time monitoring of reagent residual volume
- Real-time diagnosis of system working status







#### Flexible and Convenient software function

- Template Modifying Software
- Flexible to define various report templates for laboratory, and easy to import new template from Mindray or other users.
  Fast Emergency Detection
- One-key STAT function makes it easy to perform an emergency test for operator.
- Blood Bank Proprietary Model

It is a special function which can perform an automatic test routine with default configuration for blood bank without some redundant procedures such as requesting, scanning, etc.







Patient	СНО		×	Res	ple ID ult	1 3.28		<u>×</u>	Posi	/Time			Disk 1-1 2 20:07:05
Absorbance R	eaction C	urve	_		_		_				_	_	Phase
3500	1	_						_		_	-		
3100													
2900													Pri.
2700												-	
2200		1										-	
2100	1												
1900												-	Sec.
1700													
1500													
1100													
900												-	PriSei
700													
200													
100													
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#### Original reaction data record

• Real-time monitoring of reaction curve

Reagent probe:

Probe cleaning:

- Simultaneously display primary and secondary wavelengths to avoid interference
- Detailed profile of alert messages



### **Technical Specifications**

#### System function: Fully automated, discrete, random access for routine, STAT, urine and homogeneous immuno assays; STAT sample priority Throughput: 400 tests/hour, up to 640 tests/hour with ISE Measuring principles: Absorbance photometry, turbidimetry Methodology: End-point, Fixed-time, Kinetic, optional ISE Single/Dual/Triple/Quadruple reagent chemistries, monochromatic / bichromatic Programming: User defined profiles and calculation Sample Handling: Sample tray: 90 positions for primary or secondary tubes and sample cups Sample volume: 2~45 $\mu l$ , step by 0.1 $\mu l$ Liquid level detection, clot detection and collision Sample probe: protection Probe cleaning: Automatic washing both interior and exterior, carry-over $\leq 0.1\%$ Automatic sample dilution: Pre-dilution and post-dilution dilution with ratio up to 1:150 Dilution vessel: Cuvette Internal bar code reader (optional): Used for sample and reagent programming; applicable to various bar code systems including Codabar $\$ ITF (Interleaved Two of Five)、code128、code39、UPC/ $\mathsf{EAN}_{\times}$ Code93; capable to communicate with LIS in a bi-directional mode ISE Module (optional): Optional selection of K+, Na+, Cl-, or K+, Na+, Cl-, Li+ Throughput: Up to 320 tests per hour **Reagent Handling:** 80 positions in refrigerated Reagent tray:

compartment (4~10°C) R1: 150~350µl, step by 1µl; R2/R3/R4: 20~350µl, step by 1µl;

2 independent reagent probes

Reaction System Reaction rotor: Cuvette: Reaction volume: Operating tempe Temperature fluc Mixing system:	Rotating tray, 90 cuvettes with automatic washing Optical length 5mm 150~360µl rature: 37°C tuation: ±0.1°C						
Optical System:							
Light Source:	Halogen-tungsten lamp						
Photometer:	Reversed optics, grating photometry						
Wavelength:	340nm、380nm、412nm、450nm、505nm、						
	546nm、570nm、605nm、660nm、700nm、						
	740nm、800nm						
5	e: 0~3Abs (10mm conversion)						
Resolution:	0.001Abs						
Control and Calil	oration						
Calibration mode: Linear (one-point, two-point and multi-point),							
cambrationinioae	Logit-Log 4P, Logit-Log 5P, Spline, exponential,						
	Polynomial, Parabola						
Control rules:	Westgard multi-rule, Cumulative sum check, twin plot						
Operation Unit:							
Operation system	: Windows <sup>®</sup> XP Professional/Home SP2 or above						
	Windows <sup>®</sup> Vista Home/Business						
Interface:	RS-232						
Working Condition	ons:						
Power Supply:	200~240V, 50Hz, 1500VA						
	or 220/230V, 60Hz, 1500VA						
	or 110/115V, 60Hz, 1500VA						
Temperature:	15~30°C						
Humidity:	35~80%						
Water consumption: 20L/hour							
Dimension:	1180mm x 700mm x 1145mm (W x D x H)						

300 Kg

Weight:

Liquid level detection, collision protection and

Automatic washing both interior and exterior

inventory checking

DISTRIBUTOR:



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