

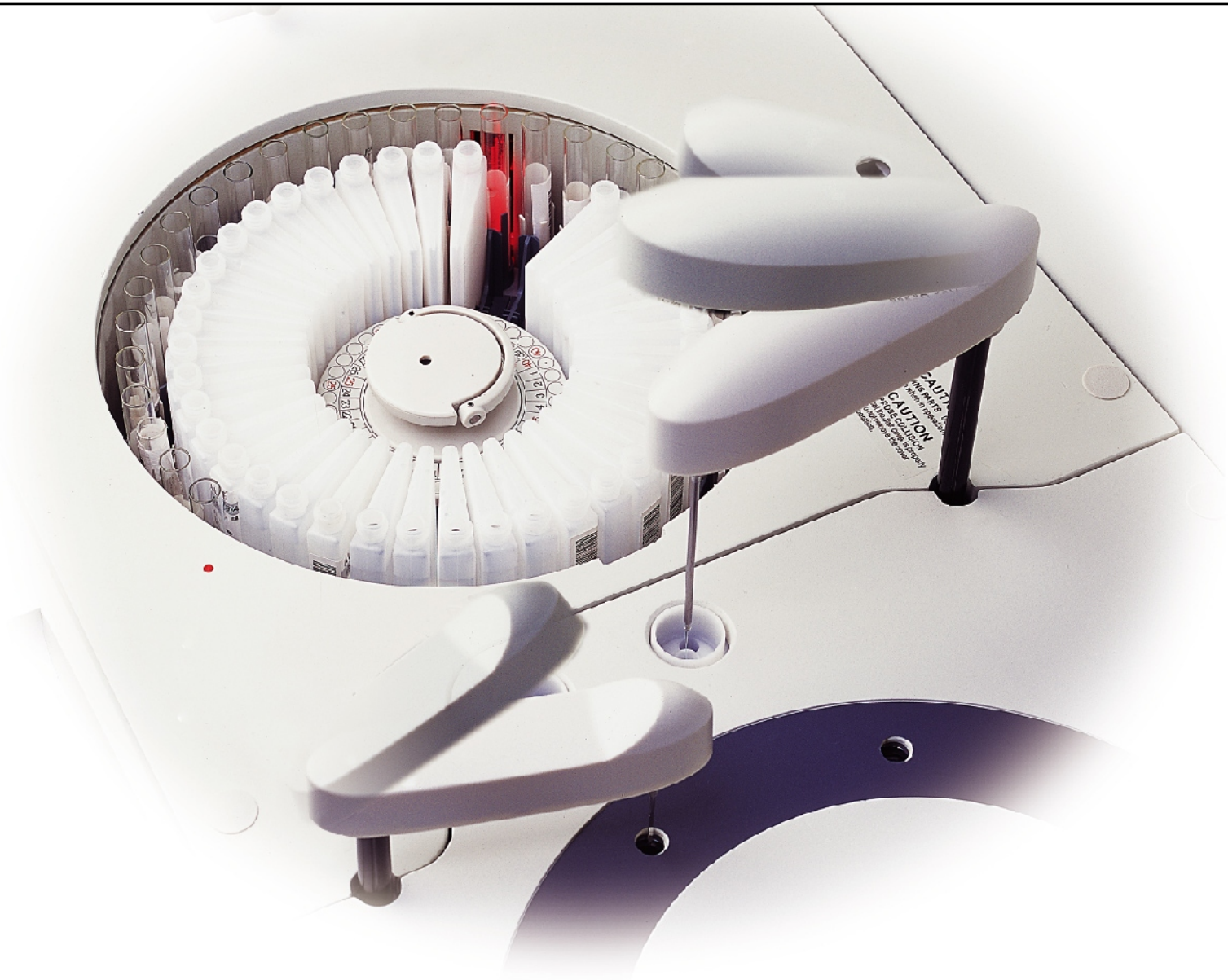
## **BS-200** Chemistry Analyzer

# BS-200

## Chemistry Analyzer

- Discrete, random access, automated
- 200 tests per hour, up to 330 tests per hour with ISE
- LIS interface bi-directional
- Optional for ISE module and internal bar code reader
- Up to 40 positions for samples and reagents respectively
- Automatic probe cleaning, liquid level detection, collision protection
- Reversed optic system with 8 wavelengths: 340-670nm
- Refrigerated reagent compartment





## Sample of Test Menu

### Enzymes

ALT	AST	ALP	ACP	$\alpha$ -HBDH	LDH	CK	CK-MB	$\alpha$ -AMY	MSO	ChE
ADA	$\gamma$ -GT	MAO	Lip	Lap	NAG					

### Substrates

TG	TC	HDL Cholesterol	LDL Cholesterol	Glu	Lactate	UREA	Cr	UA
TP	Alb	TBIL	DBIL	TBA	FMN			

### Electrolytes

Na	K	Cl	Ca	Mg	P	Fe	UIBC	Tf	Cu
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### Drug of Abuse

ALC	AMP	BAR	BZO	COC	MTD	MTQ	PCP	PPX
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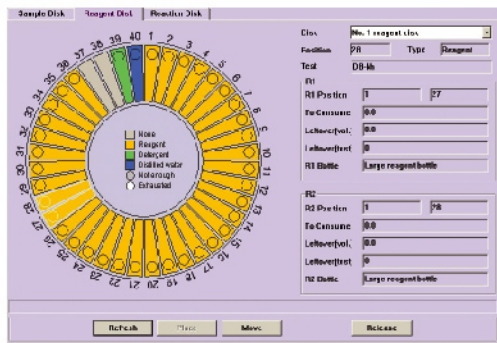
### Specific Proteins

APOAI		APOB	Lp(a)	ASO	C3	C4	CRP	IgA	IgM	IgG
Microalbumin		RF	$\beta$ 2-MG	Myoglobin		TF	FIB			

### Others

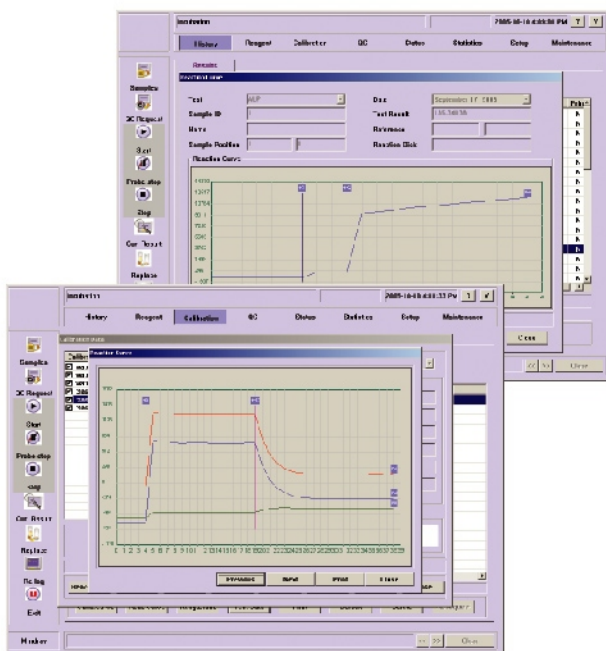
HbA1c	HbAo	U-Alb	BTR
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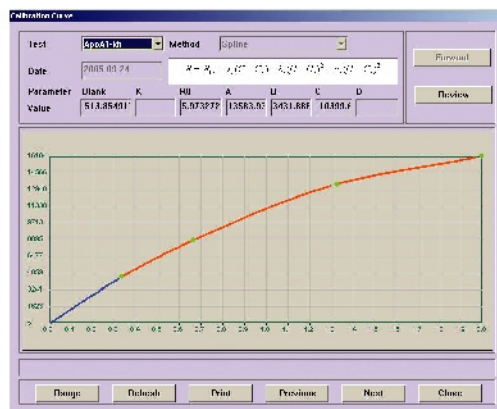
## Dynamic and real time display of running status

- Running status of reagent tray, sample tray and reaction tray
- Real time monitoring of reagent residual volume
- Intelligent carry over settings to adjust test sequence
- Probe depth adjustment automatically



## Original reaction data record

- Real time monitoring of reaction curve
- Bichromatic testing to avoid interference
- Simultaneously display primary and secondary wavelengths
- Detailed profile of alert messages
- Real time diagnosis of system working status



## Optimum calibration curve

- Calibration classification:
  - Linear curve type: Single-point linear, two-point linear and Multi-point linear.
  - Nonlinear curve type: Logistic-Log 4P, Logistic-Log 5P, Exponential5P, Polynomial5P and Spline.



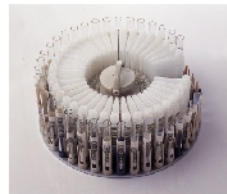


**BS-200**  
MINDRAY Chemistry Analyzer



**High quality ISE Module (optional)**

- Measuring K+, Na+, Cl-
- Throughput: up to 225 tests per hour
- 6 months shelf life



**Multi-function sample/reagent probe**

- Collision protection
- Liquid level detection
- Internal and external probe washing
- Probe depth adjustment automatically
- Pre-heating for reagents



**Excellent reaction tray**

- High stability reaction temperature control at  $37 \pm 0.1^\circ\text{C}$
- Spot photometry with high speed digital transmission system
- Contain 80 disposable reaction cuvettes
- 8 static fiber optics minimize electromagnetic interference
- Maintenance free heater elements



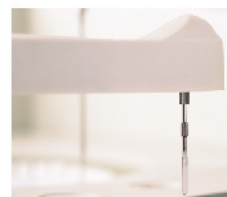
**Multi-function sample/reagent tray**

- Optional internal reagent/sample bar code reader
- 40 positions for samples and reagents respectively
- Up to 20/10 virtual sample/reagent trays can be programmed
- Primary tube and various sample cup can be used, non-fixed positions for samples, control, calibrator nor STAT
- 24 hour non stop cooling with Peltier elements



**Disposable reaction cuvettes**

- Disposable cuvettes to avoid carry over and saving of operating costs
- Automatic cuvettes blank testing to assure precise results



**High performance mixer design**

- Absence of cross contamination
- Optimal homogenization in minimum time
- It functions immediately (within the same period) depending of sample or the second reagent

# BS-200

## Chemistry Analyzer

### Technical Specifications

#### System function:

	Automatic, Discrete, Random Access STAT sample priority
Throughput:	up to 200 tests/hour (without ISE), up to 330 tests/hour with ISE
Measuring principles:	Absorbance photometry, Turbidimetry, Ion Selective Electrode technology
Methodology:	End-point, Fixed-time, Kinetic, optional ISE Single/Dual/ reagent chemistries, monochromatic / bichromatic Linear / non-linear multipoint calibration
Programming:	Open system with user defined profiles and calculation chemistries

#### Reagent/Sample Handling:

Reagent/Sample tray:	40 positions for reagents and 40 positions for samples in refrigerated compartment (4~15 ℃ )
Reagent volume:	
R1:	180~450 $\mu$ l, step by 1 $\mu$ l
R2:	30~450 $\mu$ l, step by 1 $\mu$ l
Sample volume:	3~45 $\mu$ l, step by 0.5 $\mu$ l
Reagent/Sample probe:	liquid level detection, collision protection and inventory checking
Probe cleaning:	automatic washing for both inside and outside carry over < 0.1%
Automatic sample dilution:	pre-dilution and post-dilution dilution ratio up to 150
dilution vessel:	disposable cuvette

#### Internal bar code reader (optional):

Used for sample and reagent  
programming  
Be applicable to various bar code  
systems of Codabar、ITF (Interleaved  
Two of Five)、code128、code39、  
UPC/EAN、Code93  
Capable to communicate with LIS in  
bidirectional mode

#### ISE Module (optional)

Measuring  $K^+$ ,  $Na^+$ ,  $Cl^-$   
Throughput: Up to 225 tests per hour

#### Reaction System:

Reaction rotor: rotating tray, containing 80 cuvettes  
Cuvette: optical length 5mm  
Reaction volume: 180~500  $\mu$ l  
Reaction temperature: 37 ℃  
Temperature fluctuation:  $\pm$  0.1 ℃  
Independent mixing probe

#### Optical System:

Light Source: Halogen-tungsten lamp  
Photometer: reversed optics, static fiber spot photometry  
Wavelength: 340nm、405nm、450nm、510nm、546nm、  
578nm、630nm、670nm  
Absorption range: -0.1~4.0Abs (10mm conversion)  
Resolution: 0.0001Abs

#### Control and Calibration:

Calibration mode: linear (one point, two-point and multi-point),  
Logit-Log 4P, Logit-Log 5P, spline,  
exponential, polynomial, parabola  
Control software: X-R, L-J, Westgard multi-rule, Cumulative  
sum check, twin plot

#### Operation Unit:

Operation system: Windows 2000 Pro with SP4  
Windows XP Pro / Home  
Interface: RS-232

#### Working Conditions:

Power Supply: AC200~240V, 50/60Hz, 1000W or  
AC100~130V, 50/60Hz, 1000W  
Temperature: 15-30 ℃  
Humidity: 35-80%  
Water consumption: 3.5L/hour De-ionized  
Dimension: Bench top: 860mm(W) $\times$ 700 mm(D) $\times$ 625 mm (H)  
Floor standing: 860mm(W) $\times$ 700 mm(D) $\times$ 1160 mm (H)  
Weight: Bench top: 116 kg  
Cabinet (optional): 51 kg



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