

# BS-400

## Chemistry Analyzer

### 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 chemistries

#### Sample Handling:

Sample tray: 90 positions for primary tubes or secondary cups

Sample volume: 2~45 $\mu$ l, step by 0.1 $\mu$ l

Sample probe: liquid level detection, clot detection and collision protection

Probe cleaning: automatic washing for both inside and outside, carry over  $\leq$  0.1%

Automatic sample dilution: pre-dilution and post-dilution  
dilution ratio up to 150

dilution vessel: cuvette

#### Internal bar code reader:

Used for sample and reagent programming  
Applicable to various bar code systems of Codabar, ITF (Interleaved Two of Five), code128, code39, UPC/EAN, Code93  
Capable to link in LIS bi-directional mode

#### ISE Module:

Optional selection for K<sup>+</sup>, Na<sup>+</sup>, Cl<sup>-</sup>, or K<sup>+</sup>, Na<sup>+</sup>, Cl<sup>-</sup>, Li<sup>+</sup>

Throughput: Up to 320 tests per hour

#### Reagent Handling:

Reagent tray: 80 positions in refrigeration compartment (4~10 $^{\circ}$ C)

Reagent volume: R1: 150~350 $\mu$ l, step by 1 $\mu$ l  
R2/R3/R4: 20~350 $\mu$ l, step by 1 $\mu$ l  
2 independent reagent probes

Reagent probe: liquid level detection and collision protection  
Inventory checking

Probe cleaning: automatic washing for both inside or outside  
carry over  $\leq$  0.1%

#### Reaction System:

Reaction rotor: rotating tray, 90 cuvettes with automatic washing

Cuvette: optical length 5mm

Reaction volume: 150~360 $\mu$ l

Operating temperature: 37 $^{\circ}$ C

Temperature fluctuation:  $\pm$  0.1 $^{\circ}$ C

2 independent mixing bars

#### 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

Absorbance range: 0~3Abs (10mm conversion)  
Resolution: 0.001Abs

#### Control and Calibration:

Calibration mode: linear (one-point, two-point and multi-point), 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 2000 Professional or Windows XP

Interface: RS-232

#### Working Conditions:

Power Supply: 200-240V~, 50Hz, 1500VA  
or 220/230V~, 60Hz, 1500VA  
or 110/115V~, 60Hz, 1500VA

Temperature: 15-30 $^{\circ}$ C

Humidity: 35-80%

Water consumption: 23L/hour Deionized water

Dimension: 1180mm x700mm x1145mm (WxDxH)

Weight: 300kg



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