BS-300
Chemistry Analyzer

Technical Specifications

System Function:
Automated, discrete, random access for routine, STAT, urine and homogeneous immuno assays; STAT sample priority
Throughput: 300 tests/hour, up to 420 tests/hour with ISE
Measuring principles: Absorbance photometry, Turbidimetry
Methodology: End-point, Fixed-time, Kinetic, Single/Dual reagent chemistries, Monochromatic/Bichromatic, Linear/ Non-linear multi-point calibration
Programming: User defined profiles and calculation

Sample Handling:
Sample tray: 60 positions for primary or secondary tubes and sample cups
Sample colume: 2~45µl, step by 0.1 µl
Sample probe: Liquid level detection and collision protection
Probe cleaning: Interior and exterior wash, carry-over < 0.1%
Automatic sample dilution:
Pre-dilution and post-dilution
Dilution ratio up to 3 : 225
Dilution vessel: Cuvette

Internal bar code reader (optional):
Used for sample programming
Applicable to various bar code systems of code 128, code 39, code 93, codabar, ITF, UPC/EAN
Capable to link with LIS in a bi-directional mode

ISE Module(optional):
Optional selection for K^+, Na^+, Cl^-
Throughput: Up to 180 tests per hour

Reagents Handling:
Reagent tray: 50 positions in refrigerated compartment (2~10˚C)
Reagent volume: 10~450µL, step by 1µL
Reagent probe: Liquid level detection and collision protection reagent pre-heating and inventory checking
Probe cleaning: Interior and exterior washing carry-over< 0.1%

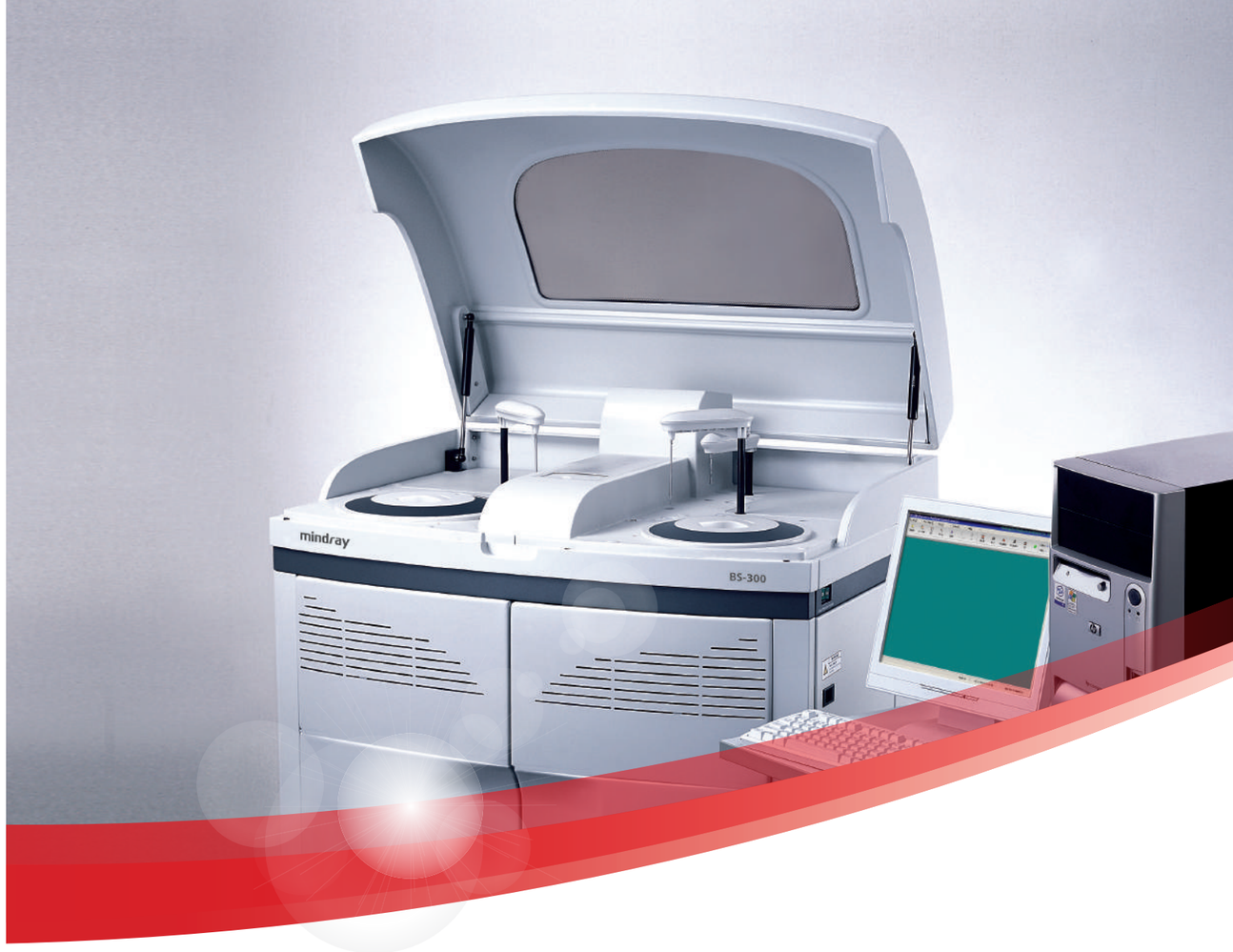
Reaction System:
Reaction rotor: Rotating tray, 80 disposable cuvettes with automatic loading
Cuvette: Optical length 5mm
Reaction volume: 150~500µL
Operating temperature: 37± 0.1˚C
Mixing: Independent mixing bar

Optical System:
Light Source: Halogen-tungsten lamp
Photometer: Reversed optics, static fiber spot photometry
Wavelengh: 340, 405, 450, 510, 546, 578, 630, 670, 700nm
Resolution: 0.001 Abs

Control and calibration:
Calibration mode: Linear (one-point, two-point and multi-point), Logit-Log 4P, Logit-Log 5P, Splline Exponential 5P, Polynomial 5P, Parabola
Control software: X-R, Westguard multi-rule, Cumulative sum check, Twin plot

Operation Unit:
Operation system: Windows® XP Professional/Home SP2 or above
Windows® 7 Home basic 32 bits
Interface: RS-232

Working Conditions:
Power Supply: 200~240V, 50/60Hz, 1000W
or 100~130V, 50/60Hz, 1000W
Temperature: 15~30˚C
Humidity: 35~85%
Water consumption: 3.5 L/hour
Dimension: 980mm x 710mm x 1200mm (W x D x H)
Weight: 186 Kg



BS-300
Chemistry Analyzer

Connect With Us

mindray
healthcare within reach

BS-300
Chemistry Analyzer

- Discrete, random access, fully automated
- 300 tests per hour, up to 420 tests per hour with ISE
- Up to 50 onboard chemistries and 3 ions
- Refrigerated reagent compartment
- Onboard capacity of 60 sample positions
- Automatic probe cleaning, liquid level detection & collision protection

- 9 wavelengths: 340~700nm
- Automatic dilution for abnormal sample
- External hand-held /Internal bar code reader (optional)
- Bi-directional LIS interface
- Low carry-over

Unique and intelligent cuvette loading system

- Disposable cuvette to avoid carry-over
- Up to 30 segments on board (300 cuvettes)
- Automated cuvette blank check
- Intelligent cuvette loading

High performance mixer design

- Optimal homogenization in minimum time
- Avoid cross contamination
- Funtion immediately (within the same sampling cycle) after sample or the second reagent dispensed

Internal bar code reader

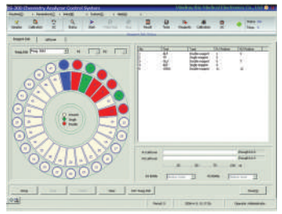
- Used for sample programming
- Applicable to various bar code systems of code 128, code 39, code 93, codabar, ITF, UPC/EAN
- Capable to link with LIS bi-directional

Refrigerated reagent tray

- 50 reagent positions for R1 and R2
- 24 hour non-stop cooling with Peltier element
- Automatic reagent residue volume monitoring

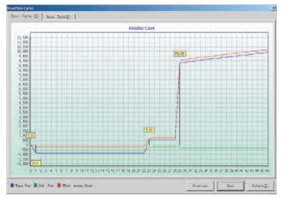
ISE Module

- Optional selection for K^+, Na^+, Cl^-
- Throughput: Up to 180 tests per hour



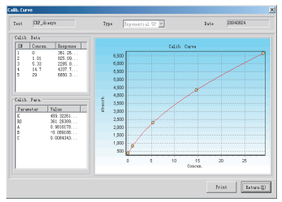
Dynamic and real-time display of running status

- Running status of sample tray, reagent tray and reaction tray
- Real-time monitoring of reagent residual volume and reaction temperature control curve



Original reaction data record

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



Optimum calibration curve

- Selection of calibration methods; Factor, Linear, Point to Point, Spline, Log Logit, Exponential

Mindray solution for clinical chemistry

After more than 10 years of research and development on reagents, Mindray can now provide 48 parameters of dedicated reagents(more than 17 others are coming), covering hepatic, renal, cardiac, lipids, diabetes, pancreatitis, inorganic ions and immunalassays, etc.,together with original calibrators with metrological traceability as well as controls for BS-300 chemistry analyzer.

Original Calibrators with traceability:

Reference Method (Certified by 'Joint Committee for Traceability in Laboratory Medicine' (JCTLM))

- International Federation of Clinical Chemistry and Laboratory Medicine (IFCC)
- National Institute of Standards and Technology(NIST)
- Centers for Disease Control and Prevention (CDC, USA)
- American Association for Clinical Chemistry (AACC)

Reference Material

- Institute for Reference Materials and Measurements (IRMM) standards
- National Institute of Standards and Technology (NIST) standards
- World Health Organization (WHO) standards
- Japan Committee for Clinical Laboratory (JCCLS) standards

Chemistry Reagents

Hepatic

Alanine Aminotransferase (ALT)
Aspartate Aminotransferase (AST)
Alkaline Phosphatase (ALP)
γ-GlutamylTransferase (γ-GT)
Direct Bilirubin (D-Bil) DSA Method
Direct Bilirubin (D-Bil)VOX Method
Total Bilirubin (T-Bil) DSA Method
Total Bilirubin (T-Bil)VOX Method
Total Protein (TP)
Albumin (ALB)
Total Bile Acids (TBA)
Prealbumin (PA)
Cholinesterase (CHE)
Adenosine deaminase (ADA) *
α-L-fucosidase (AFU) *
5'-nucleotidase (5'-NT) *

Renal

Urea (UREA)
Creatinine (CREA) Modified JafféMethod
Creatinine (CREA)Sarcosine OxidaseMethod
Uric Acid (UA)
Carbon dioxide (CO2)
Microalbumin*
β2-Microglobulin (β2-MG) *
Cystatin C (CysC) *

Cardiac

Creatine Kinase (CK)
Creatine Kinase-MB (CK-MB)
Lactate Dehydrogenase (LDH)
α-Hydroxybutyrate Dehydrogenase(α-HBDH)
Homocysteine (HCY)
Myoglobin*

Ferrum

Iron (Fe)
Ferritin (FER) *
Transferrin (TRF) *
Total iron binding capacity / unsaturated ironBinding capacity (TIBC/UIBC) *

Lipids

Total Cholesterol (TC)
Triglycerides (TG)
HDL-Cholesterol (HDL-C)
LDL-Cholesterol (LDL-C)
Apolipoprotein A1 (ApoA1)
Apolipoprotein B (ApoB)
Lipoportein(a) [LP(a)]

Pancreatitis

α-Amylase (α-AMY)
Lipase (LIP)

Diabetes

Glucose (Glu) GOD-POD Method
Glucose (Glu) HK Meth
Hemoglobin A1c (HbA1c)
Fructosamine (FUN)

Inorganic ions

Calcium (Ca)
Magnesium (Mg)
Phosphate Inorganic (P)

Rheumatism

High sensitivity C-reactive protein (hs-CRP) *
Rheumatoid Factor (RF)
Antibodies Against Streptolysin O (ASO)

Immune

Immunoglobulin A (IgA)
Immunoglobulin G (IgG)
Immunoglobulin M (IgM)
Immunoglobulin E (IgE) *
Complement C3 (C3)
Complement C4 (C4)
C-Reactive Protein (CRP)

Others

Glucose-6-phosphate dehydrogenase (G6PD) *
D-dimer*
Angiotensin converting enzyme (ACE) *
Retinol binding protein (RBP) *
D3-hydroxybutyric acid (D3-HB) *

* Coming soon