BS-120
Chemistry Analyzer

Technical Specifications

System Function:

Automatic, discrete, random access, STAT sample priority

Throughput: Up to 100 tests/hour (without ISE), up to 300 tests/hour with ISE (3 ions)

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 calculations

Reagent/Sample Handling:

Reagent/Sample tray: Up to 33 positions for sample, up to 35 positions for reagent; 24 hour non-stop refrigerated compartment (4~15˚C)

Reagent volume:

R1: 180~450μl, step by 1μl

R2: 30~250μl, step by 1μl

Sample volume: 3~45μl, step by 0.5μl

Reagent/Sample probe: Liquid level detection, collision protection and inventory checking

Probe cleaning: Automatic washing both interior and exterior Carry-over < 0.1%

Automatic sample dilution: Pre-dilution and post-dilution dilution ratio up to 1: 150

Dilution vessel: Disposable cuvette

External 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/EAN, Code93; capable to communicate with LIS in a bi-directional mode

ISE Module (optional):

Measure parameter: K^+, Na^+, Cl^-

Reaction System:

Reaction rotor: Rotating tray, containing 40 cuvettes

Cuvette: Optical length 5mm

Reaction volume: 180~500μl

Reaction temperature: 37±0.1˚C

Mixing system: Independent mixing bar

Optical System:

Light Source: Halogen-tungsten lamp

Wavelength: 340nm, 405nm, 450nm, 510nm, 546nm, 578nm, 630nm, 670nm

Linear range: 0~3.5Abs

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® XP Professional/Home SP2, Windows® 7 or above Windows® VISTA Home/Business

Interface: RS-232

Working Conditions:

Power Supply: AC 200~240V, 50/60Hz, 800W or AC 100~130V, 50/60Hz, 800W

Temperature: 15~30˚C

Humidity: 35~85%

Water consumption: 2.5L/hour

Dimension: Bench top: 690mm(W)x570 mm(D)x595 mm(H)

Weight: 75 Kg

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BS-120
Chemistry Analyzer

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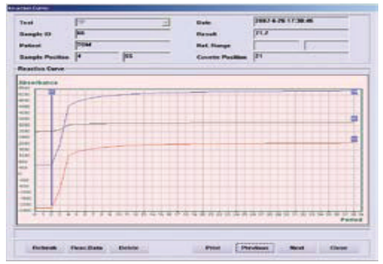
healthcare within reach

BS-120
Chemistry Analyzer

- Discrete, random access, fully automated
- 100 tests per hour, up to 300 tests per hour with ISE
- Up to 33 onboard chemistries and 3 ions
- Refrigerated reagent compartment
- Flexible configuration for sample/reagent positions
- Automatic probe cleaning, liquid level detection & collision protection
- 8 wavelengths: 340~670nm
- Automatic dilution for abnormal sample
- External bar code reader (optional)
- Bi-directional LIS interface

Dynamic and Real-time display of running status

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



Original reaction data record

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

Optimum calibration curve

- Linear curve types: One-point linear, Two-point linear and Multi-point linear
- Nonlinear curve types: Logistic-Log 4P, Logistic-Log 5P, Exponential 5P, Polynomial 5P and Spline

Flexible sample/reagent tray

- Optional external reagent/sample bar code reader
- Up to 33 positions for sample, up to 35 positions for reagent
- Up to 20/10 virtual sample/reagent trays can be programmed
- 24 hour non-stop cooling with Peltier elements

High quality ISE module (optional)

- Measurements of K+, Na+, Cl−
- 6 months shelf life

Disposable reaction cuvettes

- Disposable cuvettes to avoid carry-over and to save testing costs
- Automatic cuvettes blank testing to assure precise results

High performance mixer design

- Avoid cross contamination
- Optimal homogenization in minimum time
- Thoroughly mixes after dispending of sample or second reagent

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-120 chemistry analyzer.


Original Quality Control


Auto Chemistry Analyzer

Mindray solution for clinical chemistry


Original System Pack Reagent


Original Calibrators with Traceability

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 Panel

- 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)
- 5'-nucleotidase (5'-NT)

Renal Panel

- Urea (UREA)
- Creatinine (CREA) Modified Jaffé Method
- Creatinine (CREA)Sarcosine Oxidase Method
- Uric Acid (UA)
- Carbon dioxide (CO2)
- Microalbumin

Cardiac panel

- Creatine Kinase (CK)
- Creatine Kinase-MB (CK-MB)
- Lactate Dehydrogenase (LDH)
- α-Hydroxybutyrate Dehydrogenase(α-HBDH)

Inorganic & Anemia

- Iron (Fe)
- Transferrin (TRF)
- Calcium (Ca)
- Magnesium (Mg)
- Phosphate Inorganic (P)
- Glucose-6-phosphate dehydrogenase (G6PD)

Lipid Panel

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

Immune Panel

- Immunoglobulin A (IgA)
- Immunoglobulin G (IgG)
- Immunoglobulin M (IgM)
- Complement C3 (C3)
- Complement C4 (C4)

Diabetes Panel

- Glucose (Glu) GOD-POD Method
- Glucose (Glu) HK Method
- Fructosamine (FUN)
- β-Hydroxybutyrate(β-HB)

Rheumatism Panel

- α-Amylase (α-AMY)
- Lipase (LIP)

Pancreatitis Panel

- α-Amylase (α-AMY)
- Lipase (LIP)

Lung Panel

- Adenosine Deaminase (ADA)
- Angiotensin Converting Enzyme(ACE)