

Technical Specifications

System function

Automatic, Discrete, Random Access, Bench-top
STAT sample priority

Throughput: Constant 240 photometric tests per hour, up to 400 T/H with ISE

Measuring principles: Absorbance photometry, turbidimetry, ion selective electrode technology

Methodology: End-point, Fixed-time, Kinetic, optional ISE, Single/Double reagent chemistries, Mono-chromatic / bi-chromatic

Original system pack reagent ready to use
Close system and open system is optional

Reagent/Sample Handling

Reagent/Sample tray: 50 to 100 positions for reagents and 50 to 100 positions for samples in 24-hour refrigerated compartment (2~12 °C)

Reagent volume: R1: 100~200µL, step by 0.5µL
R2: 10~200µL, step by 0.5µL

Sample volume: 2~35µL, step by 0.1µL

Reagent/Sample probe: Liquid level detection, horizontal and vertical collision protection, inventory checking, reagent pre-warming, optional clog detection

Probe cleaning: Automatic washing for interior and exterior
Carry over < 0.05%

Automatic sample dilution: Pre-dilution and post-dilution

Mixing Unit: Independent mixing bar

Built-in 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 bi-directional mode

Reaction System

Reaction tray: 80 reusable cuvettes

Reaction volume: 100~360µL

Reaction temperature: 37 °C ± 0.1 °C by air bath

Cuvette Washing: Washing station with pre-warmed detergent and de-ionized water

ISE Module (optional)

Direct method, measuring K+, Na+, Cl-

Optical System

Light Source: Halogen-tungsten lamp

Wavelength: 12 wavelengths, 340nm, 380nm, 412nm, 450nm, 505nm, 546nm, 570nm, 605nm, 660nm, 700nm, 740nm, 800nm

Absorption range: 0~3.5Abs, resolution 0.0001Abs

Stray Light: 4.9Abs

Control and Calibration

Calibration modes: K factor, Linear (two points and multi-points), Logit-Log 4P, Logit-Log 5P, Spline, Exponential, Polynomial, Parabola, Logit-Log3P, Broken line

Control Rules: Westgard multi-rule, Levey-Jennings, Cumulative sum check, Twin plot

Operation Unit

Operation system: Windows 10

Interface: RS-232

Working Conditions

Power Supply: 200~240V, 50/60Hz, ≤1300VA or 100~130V, 60Hz, ≤1300VA

Dimension: 860 mm (length) × 660 mm (depth) × 550 mm (height)

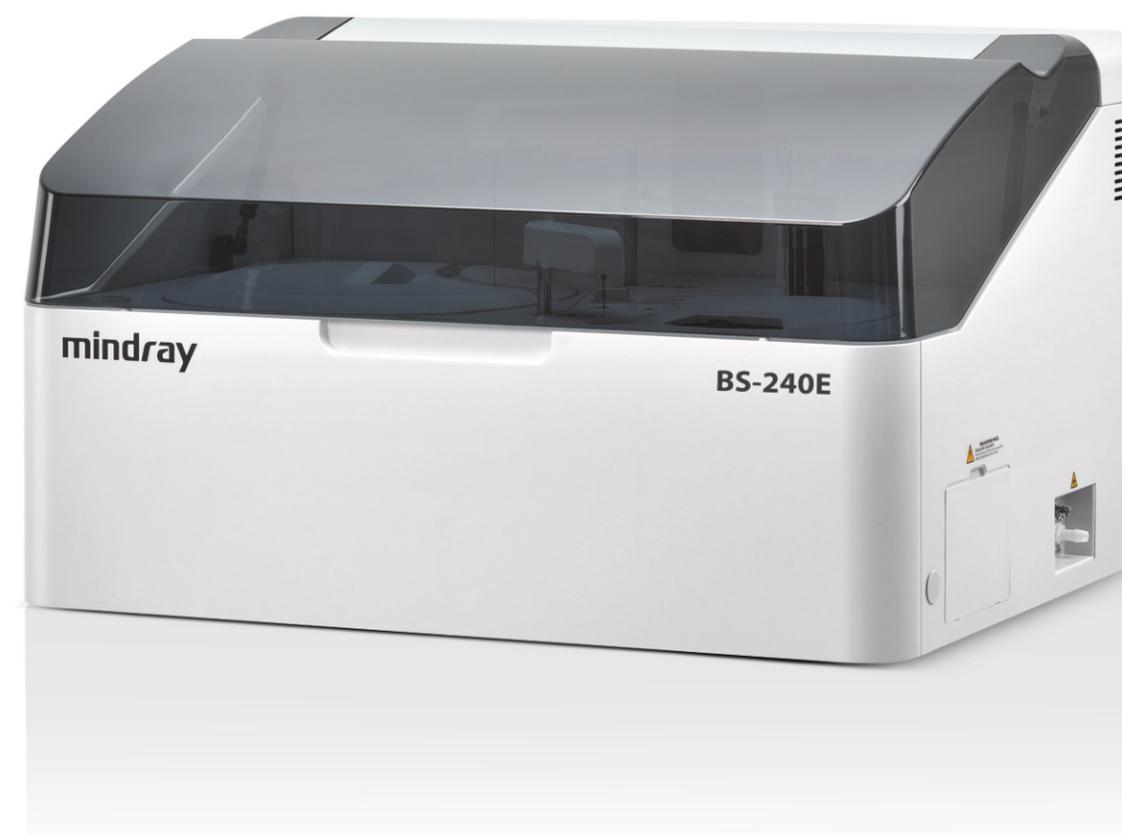
Weight: 115 kg

Water Consumption: ≤6.5 L/H

BS-240E

Chemistry Analyzer

Compact yet Robust



SAPPHIRE BIOMED PVT. LTD.

Plot No. F-223, Phase 8-B, Industrial Area, Focal Point
S.A.S. Nagar (Mohali) Punjab 160055
Tel : 8729032690, 7018410419
Landline : 0172-3192233
Email : sapphirebiomed@gmail.com | Website : sapphirebiomed.com



Large and flexible capacity

Up to 100 sample positions
Up to 100 reagent positions
(50 fixed + 50 interchangeable)



Gratings photometer

100 μ L minimum reaction volume



A Whole New Generation

with constant throughput
of 240 photometric T/H

Considerate design

Easy loading and unloading for samples
One key calibrator import

HbA1c smart-sampling function

Onboard hemolysis



BS-240E

Chemistry Analyzer



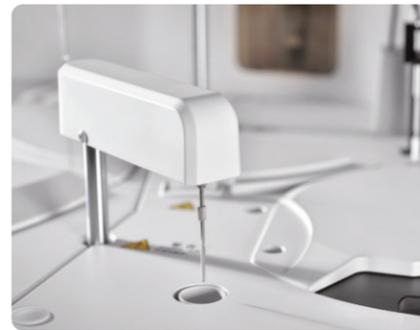
Waterfall probe cleaning



Intelligent probe with optional clog detection



Constant throughput



Independent mixing bar



Optimized washing station



Built-in barcode reader



Optional ISE module easy to access



Intuitive software with more functionalities

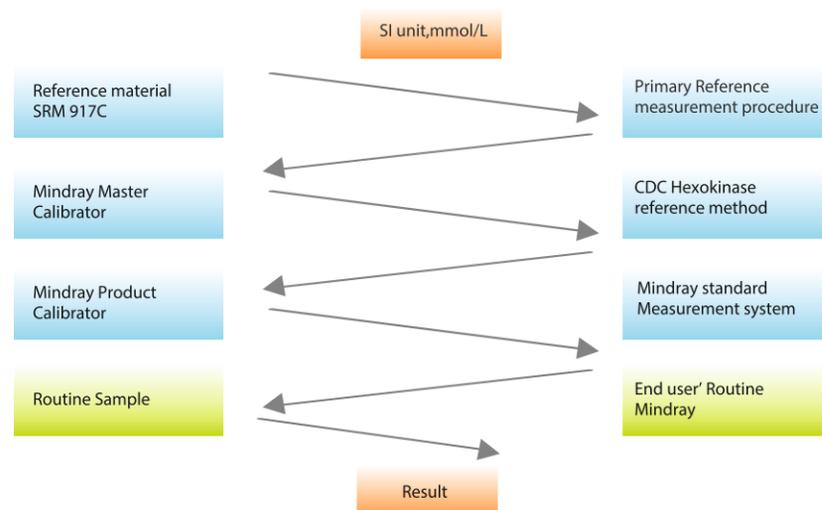


Complete traceability process

Complete calibration hierarchy and traceability chain are based on ISO standard (EN/ISO17511) from reference system to routine measurement system.

Traceability chain of Mindray measurement system (Glu)

Traceability Material Calibration / Value Assignment Procedure Implementation Uncertainty $U_c(y)$

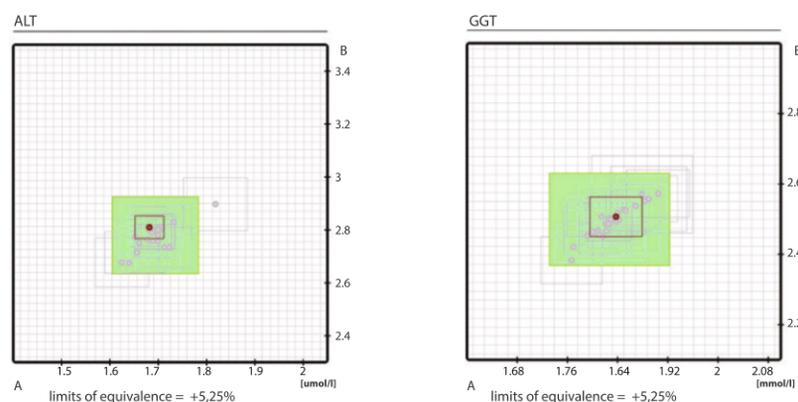


External quality assurance for reference measurement

Mindray participates in RELA (External quality control for reference laboratory).

EQA for Mindray Reference laboratory—RELA

Mindray reference laboratory has passed RELA for 6 consecutive years.



More RELA results please refer to: www.dgkl-rfb.de/81

RELA All the items Mindray participate RELA
ALT AMY ALP CK GGT GLU LDH TB TP UA UREA

Reagent menu

Hepatic Panel

Alanine Aminotransferase (ALT)
Aspartate Aminotransferase (AST)
Alkaline Phosphatase (ALP)
γ-Glutamyl Transferase (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)

Renal Panel

Urea (UREA)
Creatinine (CREA) Modified Jaffé Method
Creatinine (CREA) Sarcosine Oxidase Method
Uric Acid (UA)
Carbon Dioxide (CO₂)
Microalbumin (MALB)
β₂-Microglobulin (β₂-MG)
Cystatin C (CysC)
Retinol Binding Protein (RBP)
Total Protein in Urine/CSF (TPUC)

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
Hemoglobin A1c (HbA1c)
Fructosamine (FUN)
β-Hydroxybutyrate (β-HB)

Cardiac panel

Creatine Kinase (CK)
Creatine Kinase-MB (CK-MB)
Lactate Dehydrogenase (LDH)
α-Hydroxybutyrate Dehydrogenase (α-HBDH)
Full Range C-Reaction Protein (FR-CRP)

Inorganic & Anemia

Iron (Fe)
Ferritin (FER)
Transferrin (TRF)
Calcium (Ca)
Magnesium (Mg)
Phosphate Inorganic (P)
Unsaturated Iron Binding Capacity (UIBC)
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))

Rheumatism Panel

C-reactive Protein (CRP)
Rheumatoid Factor (RF)
Antibodies Against Streptolysin O (ASO)

Lung Panel

Adenosine Deaminase (ADA)
Angiotensin Converting Enzyme (ACE)

Pancreatitis Panel

α-Amylase (α-AMY)
Lipase (LIP)