



## **BS-240Pro**

Chemistry Analyzer

Compact yet Robust

**mindray**  
healthcare within reach



## Large and flexible capacity

Up to 100 sample positions

Up to 100 reagent positions

(50 fixed + 50 interchangeable)



**CAUTION**  
AVOID PEOPLE COLLISION  
To ensure safety, always cover the sample  
tray. Do not remove the cover  
before operation.

## A Whole New Generation



## Considerate design

More space to load samples





Gratings photometer  
100 $\mu$ L minimum reaction volume

with constant throughput  
of 240 photometric T/H

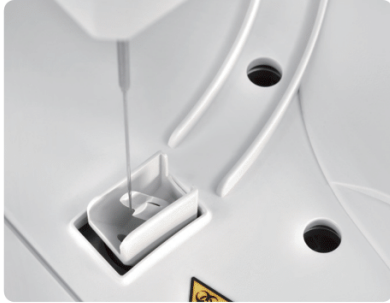


HbA1c smart-sampling  
function

Automatic preparation of hemolysate

# BS-240Pro

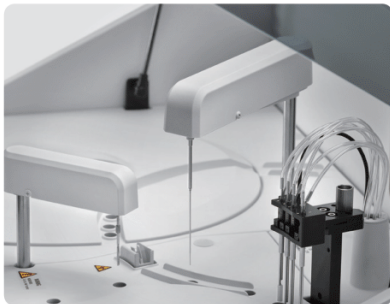
Chemistry Analyzer



Waterfall probe cleaning



Intelligent probe with optional clog detection



Constant throughput



Independent mixing bar



mindray





Optimized washing station



Built-in barcode reader



Optional ISE module easy to access



BS-240Pro



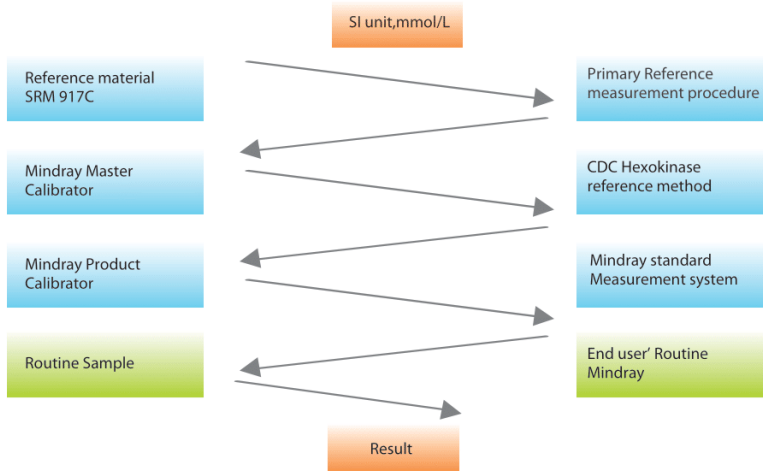
Intuitive software with more functionalities

# 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  $U_c(y)$

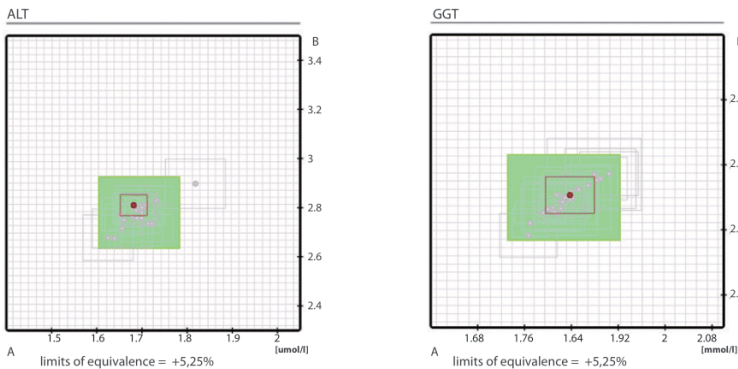


## External quality assurance for reference measurement

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](http://www.dgkl-rfb.de/81)



## Reagent menu

### Hepatic Panel

Alanine Aminotransferase (ALT)  
Aspartate Aminotransferase (AST)  
Alkaline Phosphatase (ALP)  
 $\gamma$ -GlutamylTransferase ( $\gamma$ -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)  
 $\alpha$ -L-fucosidase (AFU)  
5'-nucleotidase (5'-NT)

### Renal Panel

Urea (UREA)  
Creatinine (CREA)Modified Jaffé Method  
Creatinine (CREA)Sarcosine Oxidase Method  
Uric Acid (UA)  
Carbon dioxide (CO<sub>2</sub>)  
Microalbumin(MALB)  
 $\beta$ 2-Microglobulin ( $\beta$ 2-MG)  
Cystatin C (CysC)  
Retinol binding protein( RBP)

### 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)  
 $\beta$ -Hydroxybutyrate( $\beta$ -HB)

### Cardiac panel

Creatine Kinase (CK)  
Creatine Kinase-MB (CK-MB)  
Lactate Dehydrogenase (LDH)  
 $\alpha$ -Hydroxybutyrate Dehydrogenase( $\alpha$ -HBDH)  
High sensitive C-reaction protein( HS-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

$\alpha$ -Amylase ( $\alpha$ -AMY)  
Lipase (LIP)

# BS-240Pro

## Chemistry Analyzer

### 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

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

#### ISE Module (optional)

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

One key calibrator import function

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

Mindray Building, Keji 12th Road South,  
High-tech Industrial Park, Nanshan, Shenzhen 518057, P.R. China  
Tel: +86 755 8188 8998 Fax: +86 755 26582680  
E-mail: intl-market@mindray.com www.mindray.com

**mindray** | healthcare solutions are registered trademarks or trademarks owned by Shenzhen Mindray Bio-medical Electronics Co., LTD.  
© 2015 Shenzhen Mindray Bio-Medical Electronics Co., Ltd. All rights reserved. Specifications subject to changes without prior notice.  
P/N:ENG-BS-240Pro-210285X8P-20170703

**mindray**