BS-430
Chemistry Analyzer

Technical Specifications:

System Function: Automatic, discrete, random access, STAT sample priority

Throughput: 420 photometric tests per hour, up to 626 tests per hour with ISE

On-board tests: 90 photometric tests + 3 ISEs + 3 serum indices

Sample Handling:

Sample tray: 102 sample positions,
Sample volume: 1.5µL~45µL, step by 0.1µL
Sample probe: Liquid level detection, collision protection, clog detection (optional), and auto-dilution, automatic hemolysis
Carry-over≤0.05µL

Reagent Handling:

Reagent tray: 92 reagent positions with 24-hour refrigeration 2~8°C,
Reagent volume: 10µL~200µL, step by 0.5µL
Reagent probe: Liquid level detection, collision protection, bubble detection, concentrated reagent with auto-dilution

Built-in Bar Code Reader (optional):

Sample and reagent bar code readers support Codabar, ITF (Interleaved Two of Five), Code128, Code39, UPC/EAN and code93,
Capable to connect with LIS in Bi-directional mode

Reaction System:

Cuvettes: 93 reusable cuvettes with 8-step auto-washing
Reaction temperature: 37 ± 0.1°C
Reaction volume: 100~300µL
Mixing system: 2 independent mixers with speed detection

Optical System:

Light source: 12V 20W tungsten-halogen lamp
Photometer: Grating system
Wavelength: 340nm, 380nm, 412nm, 450nm, 505nm, 546nm, 570nm, 605nm, 660nm, 700nm, 740nm, 800nm
Absorbance range: 0~3.5A

ISE Module (Optional):

K^+, Na^+, Cl^-

Control and Calibration:

Calibration mode: 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 serial port

Working Conditions

Power supply: 220V-240V, 50/60Hz, ≤1000VA or 110V-130V, 60Hz, ≤1000VA
Water consumption: ≤20 L/H
Dimension: 1050 mm (W) * 720 mm (D) * 1150 mm (H)
Weight: ≤200 Kg

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ISO 13485:2016 & 9001:2015 CERTIFIED COMPANY

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AVIENbio®
Complete Healthcare Solution

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Precise pipetting system

Highly polished probes are equipped with multiple technologies to ensure the accuracy and reliability. The minimum sample volume is as low as 1.5μL.

Efficient washing system

Interior and exterior washing reduces the carry-over of sample probe to be less than 0.05%.

Pre-warmed de-ionized water and detergent ensures the cleanliness of cuvettes.

Intelligent mixing system

Stepper motors with speed monitoring optimizes the mixing effect.

Advanced optical system

The technology-enhanced grating photometer effectively reduces the stray light and enhances the measuring accuracy of test results. The dot light source lowers the minimum reaction volume to 100μL and maximizes the cost efficiency. Prolong the service life of the lamp by auto sleep function.

Reliable heating system

The maintenance-free direct solid heating technology stabilizes the reaction temperature at 37°C. 24-hour refrigeration maintains the temperature of reagent compartment between 2~8°C.

New software platform

Inherited from Mindray high-end products, the user-friendly software integrates more practical functionalities and makes itself more easy-to-use. The step-by-step maintenance guide allows the mainte nance easier and more comprehensive.

Total solution for clinical chemistry

Dedicate to providing a total solution for clinical chemistry with traceability to ensure the ultimate accuracy of test results.

Optimized integration of the whole system

All parameters are optimized during the integration to maximize the reliability of test results.

HbA1c smart-sampling

The smart-sampling technology allows on-board hemolysis for HbA1c.

Chemistry Reagents

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 (CO_2)
- Microalbumin (MALB)
- β2-Microglobulin (β2-MG)
- Cystatin C (CysC)
- Retinol Binding Protein (RBP)
- Total Protein In Urine & CSF (TPUC)

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)

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

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)

Diabetes Panel
- Glucose (Glu) GOD-POD Method
- Glucose (Glu) HK Method
- Hemoglobin A1c (HbA1c)
- Fructosamine (FUN)
- β-Hydroxybutyrate (β-HB)

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))

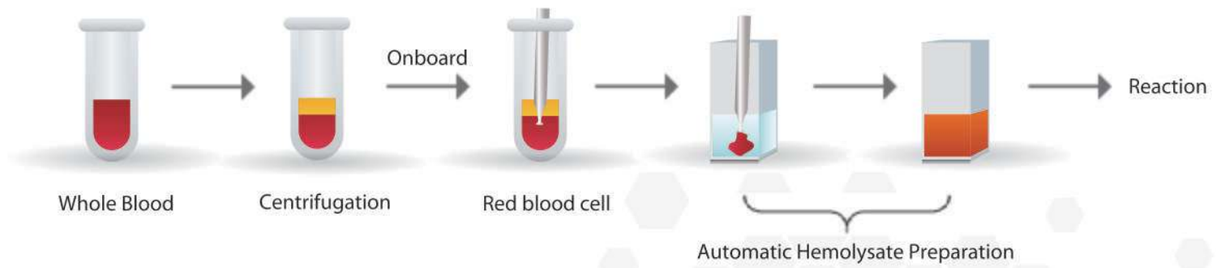
Rheumatism Panel
- C-reactive Protein (CRP)
- Rheumatoid Factor (RF)
- Antibodies Against Streptolysin O (ASO)

Pancreatitis Panel
- α-Amylase (α-AMY)
- Lipase (LIP)

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

HbA1c Smart-sampling Technology

BS-430 chemistry analyzer utilizes HbA1c smart-sampling technology, which allows onboard automatic hemolysate preparation for whole blood samples, thus achieving shorter turnaround time (TAT) and eliminating any biohazardous risks or any errors by manual operation.



Mindray HbA1c assays of enzymati method, with application of specified protease and Fructosyl Peptide Oxidase (FPOX), has a good correlation with HPLC method. The enzymatic method is proven to have high precision, specificity and better performance to avoid interference from hemoglobin variants, and it is traceable to IFCC/NGSP reference methods.

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