▶ **Excellent performance, high reliability, and ease of use**

labXpert
Coming as standard configuration
Same software as BC-6 series

Applicable to different sample types
Peripheral blood/Capillary blood
Pre-diluted blood/Body fluid

RFID
Encryption key management

Floating screen
Switching between different analysis
modes with a single touch

① ② ③ ④
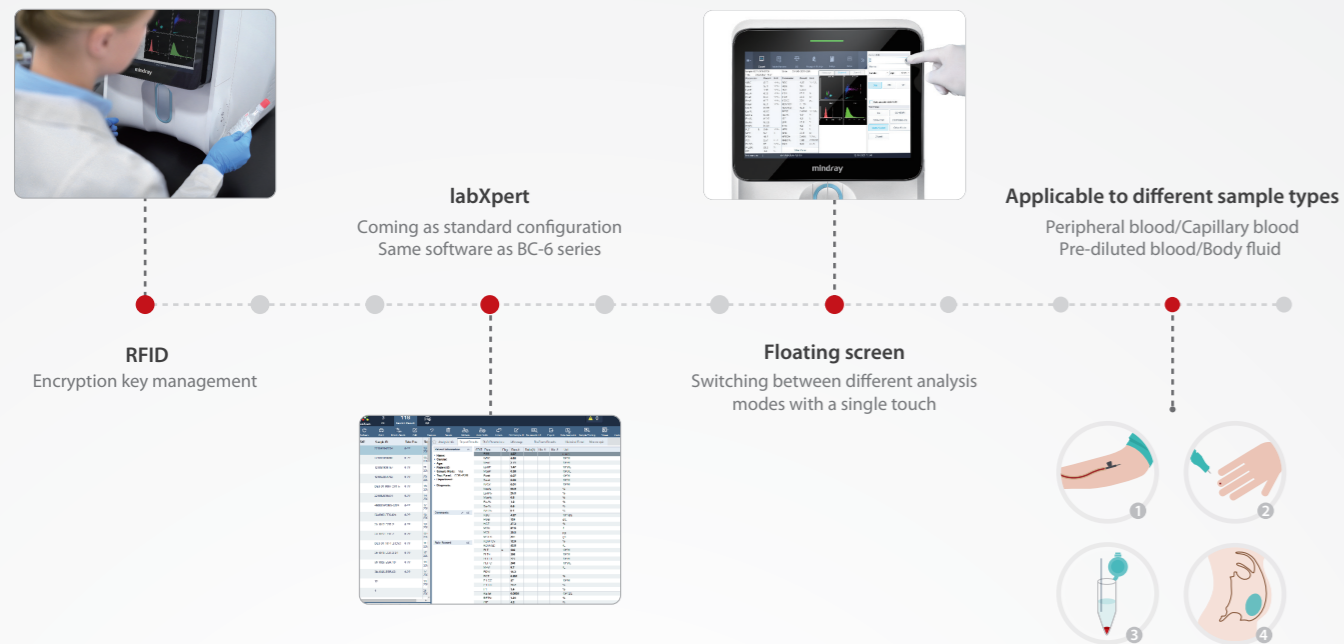
▶ **An all-in-one solution that goes above and beyond your expectations**

Excellent performance
Reliable results for abnormal and interfered samples

Superior functionality
Integrated CBC + ESR detection provides a comprehensive tool for inflammation detection Optical PLT-H ensures reliable PLT results even with interference

SF Cube
• SF Cube 3D fluorescent platform ⊙
• IMG/NRBC reportable parameters
• Accurate measurement of low WBC/PLT count
• Anti-aging capability:
  24h (room temperature)
  48h (refrigerated transportation)

• Integrated CBC + ESR analyzer ⊙
• Optical PLT-H in every CD test ⊙
• Integrated RET* & body fluid analyzer

Interactive excellence
Refined details for the optimal user experience

• iHelp videos ⊙
• Floating screen
• Ease of maintenance

BC-700 & BC-720
Auto Hematology Analyzer with ESR

Key Specifications

Principles
WBC (IMG/Neu/Mon/Lym/Eos/Bas), NRBC/RET*,PLT-H/PLT-O*/IPF:
SF Cube ^ Cell Analysis Technology
^S: Scatter; F: Fluorescence; Cube: 3D analysis

RBC, PLT
Focusing Flow-DC Impedance Method

HGB
Colorimetric method

ESR
Photometric method

Number of measuring parameters (whole blood): 109
Number of reportable parameters: 41
WBC Bas# Bas% Neu# Neu% Eos# Eos% Lym# Lym% Mon#
Mon% IMG# IMG% RET%* RET#* RHE* IRF* LFR* MFR* HFR*
RBC HGB MCV MCH MCHC RDW-CV RDW-SD HCT NRBC#
NRBC% PLT PLT-I PLT-H PLT-O* MPV PDW PCT P-LCR P-LCC
IPF ESR
Number of research parameters: 68*

Number of measuring parameters (body fluid): 18
Number of reportable parameters: 7
WBC-BF TC-BF# MN# MN% PMN# PMN% RBC-BF
Number of research parameters: 11

Sample volume
CD (whole blood): 23ul
CD+ESR (whole blood): 160ul
Predilute: 20ul

Data storage capacity
Up to 150,000 results including numeric and graphical
information *

Throughput
CD 80t/h CDR 45t/h CD+ESR 40t/h

Analysis Mode

Sample Type	Analysis Mode
Whole blood	CBC, CBC + DIFF, CBC + DIFF + RET®, CD + ESR, CDR + ESR®, CD/WBC-3X, CDR/PLT-5X®, and other modes
Predilute	CBC, CBC + DIFF, CDR®, and other modes
Body fluid	CBC + DIFF

Physical Specifications

Dimensions
500D x 325W x 450H mm

Weight
≤35Kg

Voltage
100V-240V~ (±10%)

Frequency
50Hz/60Hz (±1Hz)

Power input
300VA

External output
LAN x 1 , USB x 4 (Specifications: DC 5V; 500mA;
USB 2.0 x 3; USB 3.0 x 1)

Normal Operating Environment

Ambient temperature:
10℃ ~ 35℃

Relative humidity:
30% ~ 85%

Atmospheric pressure:
70.0kPa ~ 106.0kPa^
^Note : Required altitude for normal operation:
-400m ~ +3000m

Performance

Parameter	Linearity Range	Precision	Carryover
WBC	0-500×10⁹ /L	≤2.5% (≥4.51×10⁹ /L)	≤ 1.0%
RBC	0-8.60×10¹²/L	≤1.5% (≥3.5×10¹²/L)	≤ 1.0%
HGB	0-260g/L	≤1.0% (110-180g/L)	≤ 1.0%
HCT	0-75%	≤1.5% (30%-50%)	≤ 1.0%
PLT*	0-5000×10⁹ /L	≤ 1.5(SD) (≤20×10⁹/L)^ ≤ 2.5% (≥100×10⁹/L)^	≤ 1.0%
RET*	0-0.8×10¹²/L	≤15% (RBC ≥ 3.00×10¹²/L RET%: 1.00% ~ 4.00%)	≤ 1.0%
ESR		≤1.8(SD)(0~20mm/h)	≤ 1.0%
^ Note: Applicable only to CDR/PLT-O 5x and CR/PLT-O 5x models			

Items marked with an asterisk (*) apply only to BC-720

www.mindray.com

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BC-700 & BC-720
Auto Hematology Analyzer with ESR

Above and Beyond

Mindray

DESIGN AWARD 2021
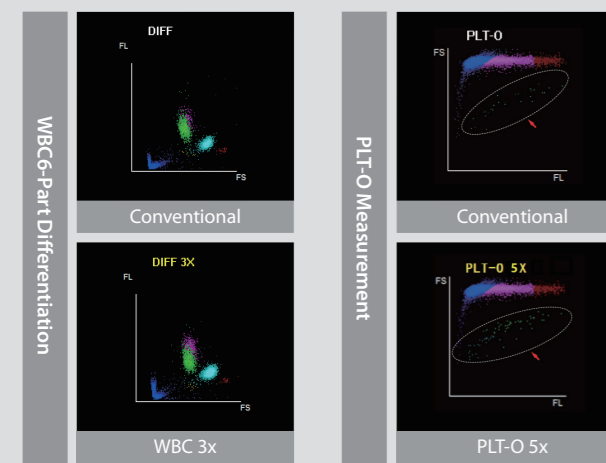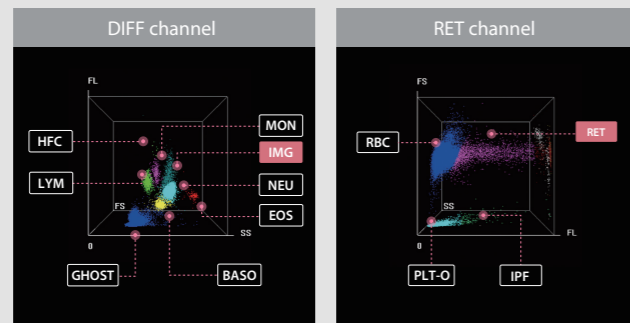
Mindray healthcare within reach

BC-700 & BC-720 Auto Hematology Analyzer with ESR
• • • Above your expectations

▶ **SF Cube fluorescent technology allows reliable counting and differentiation of abnormal samples**

— **More refined and reliable cell differentiation**

3D fluorescent analysis technology allows reliable differentiation of immature and other abnormal cells, such as immature granulocytes (IMGs), reticulocytes (RETs*), and immature platelet fraction (IPF).

DIFF channel / RET channel

WBC-Part Differentiation — DIFF / Conventional / DIFF 3X / WBC 3x
PLT-O Measurement — PLT-O / Conventional / PLT-O 5X / PLT-O 5x

— **More reliable measurements for low-value samples**

The BC-700 & BC-720 3D fluorescence analysis platform is designed with multiple counting WBC-3x and PLT-O 5x analysis modes to help ensure higher reliability for low-value WBC and PLT samples. In addition, the PLT de-aggregation function can reduce the cumbersome review work.

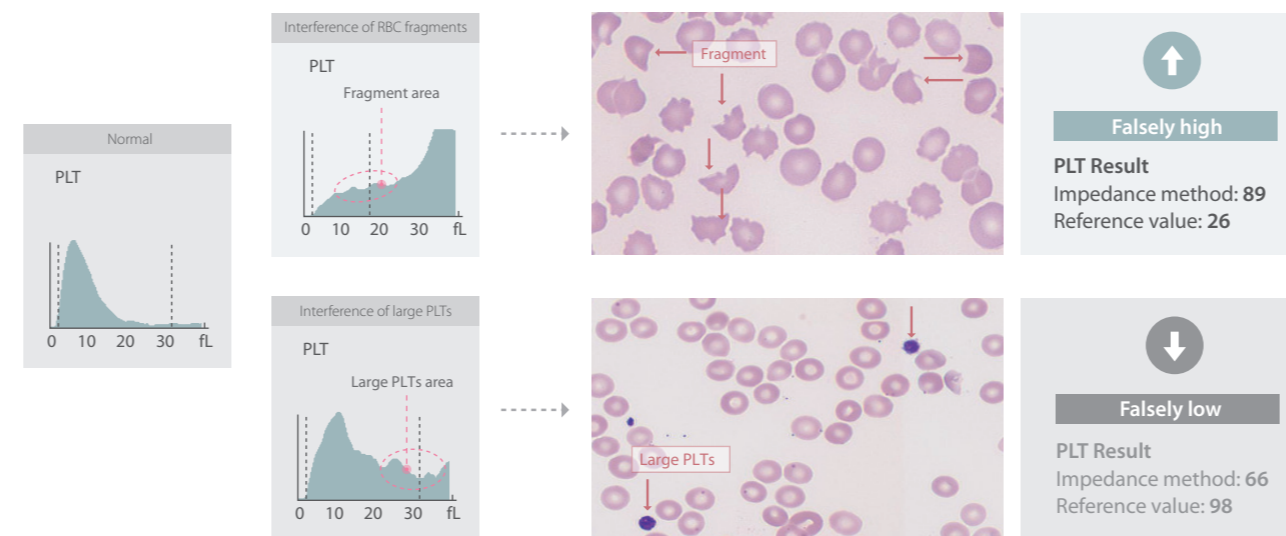— **More comprehensive alarm messages for abnormalities**

The analyzer provides a detailed list of over 40 prompt messages, including WBC message, RBC message, and PLT message. This allows laboratory technicians to intuitively and quickly identify abnormal samples and proceed further with the samples in a timely manner. This in turn helps to avoid missed diagnosis of blood disease and false reports.

BC-700 & BC-720 Auto Hematology Analyzer with ESR
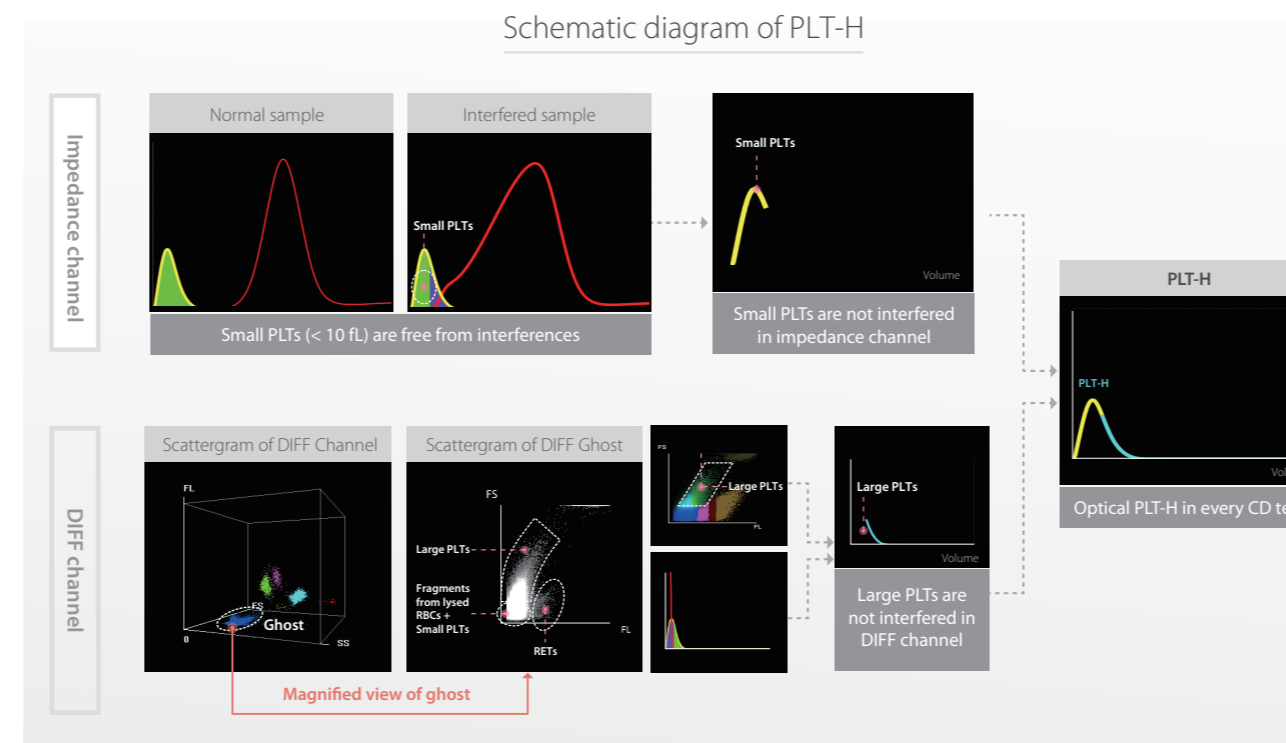### • • • Beyond your expectations

▶ **Limitations of traditional PLT counting**

In the traditional impedance method, PLTs are subject to interferences that may lead to falsely high or falsely low results (as shown in the figure). Once an error report is generated, it will directly affect the judgment and decision-making of clinicians. The results reported at the clinical decision level are related to patient safety. Therefore, accurate PLT results are critical in clinical practice.

Interference of RBC fragments — Fragment
Falsely high
PLT Result
Impedance method: 89
Reference value: 26

Interference of large PLTs — Large PLTs
Falsely low
PLT Result
Impedance method: 66
Reference value: 98

Optical PLT-H in every CD test

In order to solve the above problem, we have developed a brand new parameter PLT-H.
It combines small PLTs from the conventional impedance method and large PLTs from the optical method. The solution can resist the interferences in conventional PLT detection without requiring extra reagents.

Schematic diagram of PLT-H

Impedance channel:
Normal sample / Interfered sample — Small PLTs
Small PLTs (< 10 fL) are free from interferences
Small PLTs are not interfered in impedance channel
PLT-H
Optical PLT-H in every CD test

DIFF channel:
Scattergram of DIFF Channel — Ghost
Magnified view of ghost
Scattergram of DIFF Ghost — Large PLTs, Fragments from lysed RBCs + Small PLTs, RETs
Large PLTs are not interfered in DIFF channel

CD + ESR in one test provide reliable ESR results with greater ease

The BC-700 series integrates an automatic ESR module in a hematology analyzer. It can also generate both CBC & ESR results in one test within 1.5 min. In addition, it saves the costs that would otherwise be incurred for the purchase, maintenance, consumables, and storage space of a separate ESR analyzer. Compared with the traditional Westergren method, this method performs better in quality traceability, repeatability, speed, safety, and level of automation.

Accurate
- Great correlation with the Westergren method
- Same QC and calibrator as in the BC-6000 series
- Combined examination helps to avoid the interferences of dehydration, polycythemia vera and anemia on ESR results;

Cost-effective
- The integrated instrument is capable of both CBC and ESR detection;
- Takes up the space of only one analyzer.

Automatic
- Report CBC + ESR results together within 1.5 min;
- The measurement results are protected against the influence of subjective factors;
- Automation can reduce the biosafety hazards that may otherwise be introduced by a manual method.