

# BC-760 & BC-780

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): 25ul 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

840D x 655W x 600H mm

### Weight

≤70.6Kg

### Voltage

100V-240V~ (±10%)

### Frequency

50Hz/60Hz (±1Hz)

### Power input

600VA

### External output

LANx1, USB x 4 (Specifications: DC 5V; 500mA;

USB2.0 x 3; USB3.0 x 1)

## Normal Operating Environment

### Ambient temperature:

10°C ~ 35°C

### 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	0-500×10 <sup>9</sup> /L	≤2.5% (≥4.51×10 <sup>9</sup> /L)	≤ 1.0%
RBC	0-8.60×10 <sup>12</sup> /L	≤1.5% (≥3.5×10 <sup>12</sup> /L)	≤ 1.0%
HGB	0-260g/L	≤1.0% (110-180g/L)	≤ 1.0%
HCT	0-75%	≤1.5% (30%-50%)	≤ 1.0%
PLT*	0-5000×10 <sup>9</sup> /L	≤ 1.5(SD) (≤20×10 <sup>9</sup> /L)^ ≤ 2.5% (≥100×10 <sup>9</sup> /L)^	≤ 1.0%
RET*	0-0.8×10 <sup>12</sup> /L	≤15% (RBC ≥ 3.00×10 <sup>12</sup> /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-780

**mindray**

# BC-760 & BC-780

Auto Hematology Analyzer with ESR

## Above and Beyond



[www.mindray.com](http://www.mindray.com)

P/N:ENG-BC-760 & BC-780 ESR-210285X6P-20220115  
©2021 Shenzhen Mindray Bio-Medical Electronics Co., Ltd. All rights reserved.

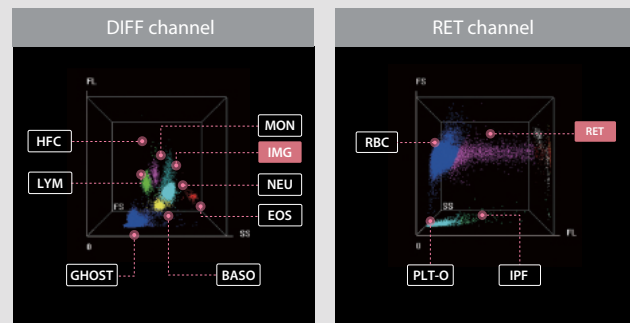
**mindray**  
healthcare within reach

••• Above your expectations

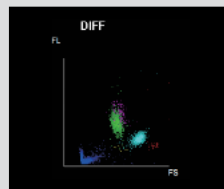
► SF Cube fluorescent technology allows reliable counting and differentiation of abnormal samples

— More refined and reliable cell differentiation

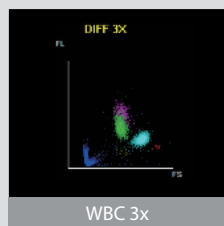
3D fluorescent analysis technology allows reliable differentiation of immature and other abnormal cells, such as immature granulocytes (IMGs), reticulocytes (RETs\*), and immature platelet fraction (IPF).



WBC-Part Differentiation

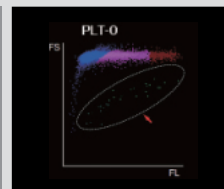


Conventional

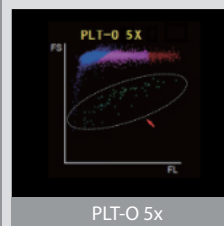


WBC 3x

PLT-O Measurement



Conventional



PLT-O 5x

— More reliable measurements for low-value samples

The BC-760 & BC-780 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.

Parameter	Result	Unit	Parameter	Result	Unit
WBC	H 18.88	10 <sup>9</sup> /L	RBC	4.99	10 <sup>12</sup> /L
Neut%	H 15.90	%	HGB	L 100	g/L
Lymph%	L 0.32	%	HCT	L 0.382	L
Mid%	L 0.43	%	MCV	L 72.4	fL
Eos%	L 0.01	%	MCH	L 21.7	pg
Bas%	L 0.02	%	MCHC	L 300	g/L
RDW	H 0.43	%	RDW-CV	H 0.236	%
Neu%	H 0.564	%	RDW-SD	H 77.7	fL
Lym%	L 0.019	%	RETs	0.0304	10 <sup>12</sup> /L
Mon%	L 0.026	%	RET%	0.01	%
Eos%	L 0.000	%	IPF	10.6	%
Bas%	L 0.001	%	LRF	96.4	%
MPV	R 10.9	fL	MFR	8.0	%
PDW	R 14.6	%	HFR	2.6	%
PCT	R 1.31	L	RHE	L 20.5	pg
PLCR	R 39	%	NRBC	0.000	10 <sup>9</sup> /L
PLCR	R 45.3	%	NRBC%	0.00	%
IPF	R 5.7	%	ESR	5.37	mm/h

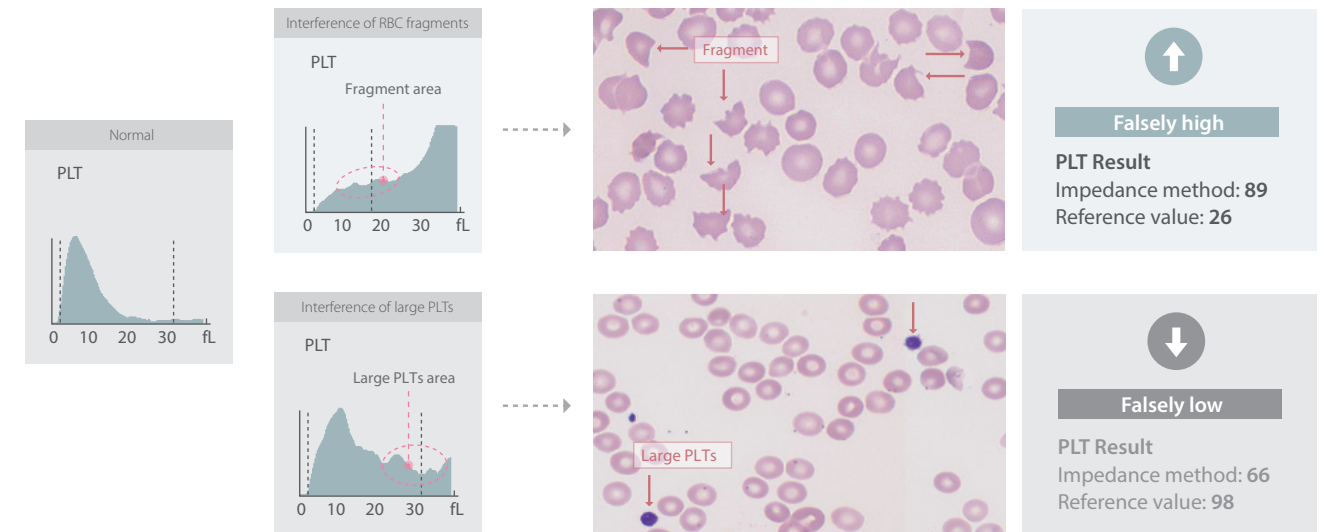
— More comprehensive alarm messages for abnormalities

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.

••• Beyond your expectations

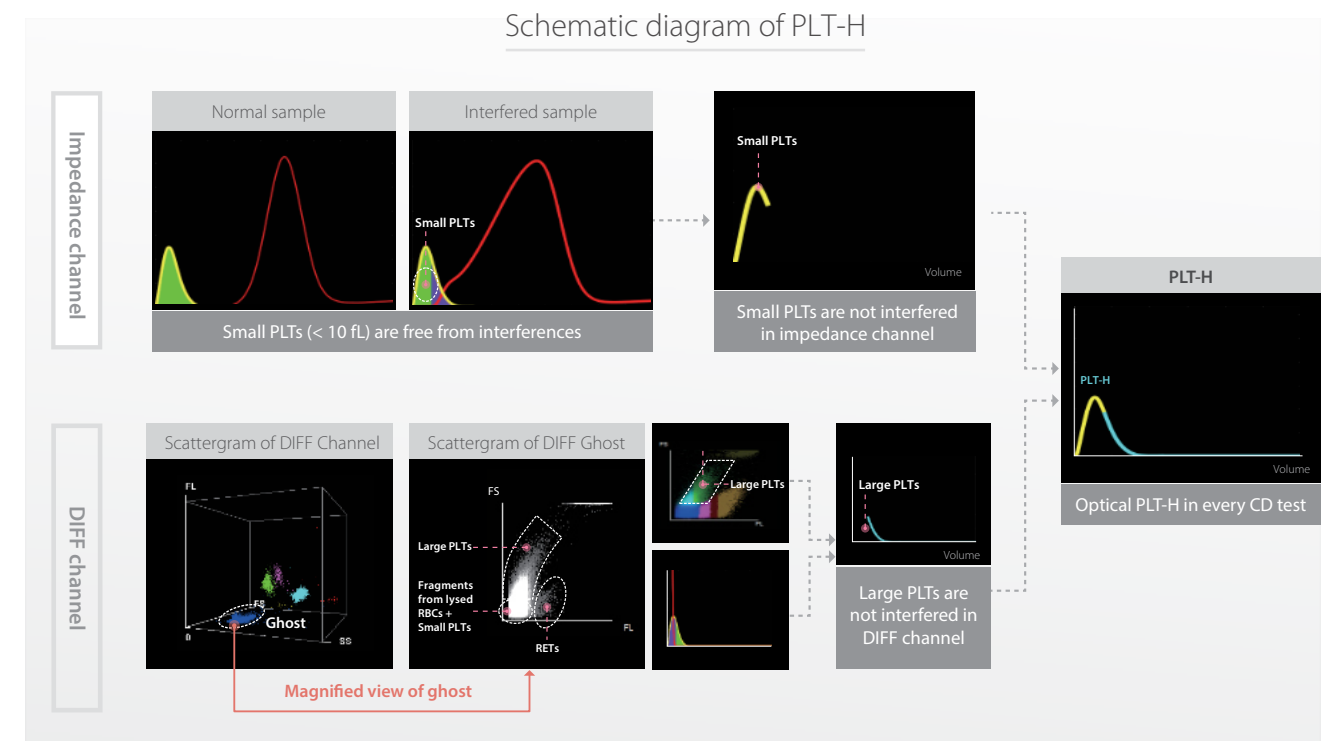
► Limitations of traditional PLT counting

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.



Optical PLT-H in every CD test

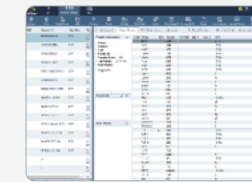
In order to solve the above problem, we have developed a brand new parameter PLT-H. It combines small PLTs from the conventional impedance method and large PLTs from the optical method. The solution can resist the interferences in conventional PLT detection without requiring extra reagents.







**RFID**  
Encryption key management



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



**Floating screen**  
Switching between different  
analysis modes with a single touch

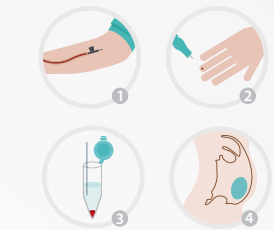
▶ **Excellent performance, high reliability, and ease of use**



**Continuous autoloading**  
5 positions x 6 racks



**Cap piercing STAT**  
Supports STAT samples and capillary blood samples;  
minimizes bio-safety hazards



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

## 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.



## ▶ An all-in-one solution that goes above and beyond your expectations

