

# BC-5300

## Auto Hematology Analyzer

### Technical Specifications:

#### Principles

Flow Cytometry (FCM), Semi-conductor Laser scatter, chemical dye method, independent Basophil channel  
Impedance method for WBC, RBC, PLT counting  
Cyanide-free reagent for Hemoglobin test

#### Parameters

27: WBC, Lym%, Mon%, Neu%, Eos%, Bas%, Lym#, Mon#, Neu#, Eos#, Bas#, RBC, HGB, HCT, MCV, MCH, MCHC, RDW-CV, RDW-SD, PLT, MPV, PDW, PCT, LIC%, LIC#, ALY%, ALY#  
3 histograms and 1 scattergram

#### Throughput

Up to 60 samples per hour

#### Sample Volume

Whole Blood: 20 µL  
Prediluted: 20 µL

#### Test Mode

CBC CBC+DIFF

#### Performance

Carryover	Precision	Linearity
WBC ≤ 0.5%	≤ 2.0% (4-15 x 10 <sup>9</sup> /L)	0.00-99.99 x 10 <sup>9</sup> /L
RBC ≤ 0.5%	≤ 1.5% (3.5-6.0 x 10 <sup>12</sup> /L)	0.00-8.00 x 10 <sup>12</sup> /L
HGB ≤ 0.5%	≤ 1.5% (110-180g/L)	0-250g/L
PLT ≤ 1.0%	≤ 4.0% (150-500 x 10 <sup>9</sup> /L)	0-1000 x 10 <sup>9</sup> /L

#### Data Storage Capacity

Up to 40,000 results including numeric and graphical information



#### Communication

LAN Port supports HL7 protocol

#### Operating Environment

Temperature: 15°C~30°C  
Humidity: 30~85%  
Air Pressure: 70~106 kPa

#### Power Requirement

A.C 100-240V ≤ 300VA 50/60Hz

#### Dimension and Weight

410mm(L) x 470mm(W) x 530mm(H)  
Weight: ≤45 Kg



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## Auto Hematology Analyzer



Satisfaction in test

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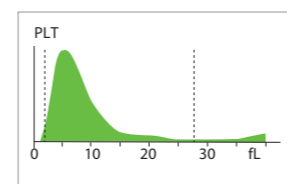
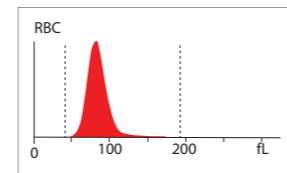
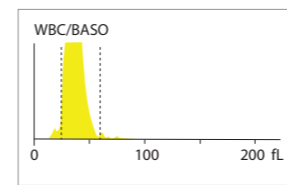
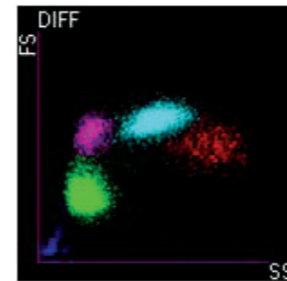
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healthcare within reach

# BC-5300

## Auto Hematology Analyzer

The new BC-5300 Auto Hematology Analyzer is a bench top system, combining three mainstream technologies: laser scatter, flow cytometry and chemical dye to provide reliable and accurate 5-part differentiation on white blood cells. Tailored for independent labs, BC-5300 is compact, economical and very friendly to use. Only 20uL of blood is enough to have a 27-parameter report within 1 minute. The software also provides arrays of advanced features to enhance lab efficiency, for example, customization on reference range and report formats, patient historical check, workload statistics and LIS connection. BC-5300 requires zero daily maintenance and is equipped with automatic cleaning set-up to make your daily use as comfortable as possible.

- Semi-conductor laser scatter combined with chemical dye method and advanced flow cytometry
- 27 parameters for complete 5-part differentiation (CBC+DIFF) on white blood cells including immature cells
- Compact and no external air pump to avoid noise
- 20 µL blood sampling for CBC+DIFF test while 15uL for CBC test
- Up to 60 samples per hour throughput
- Supports both whole blood and capillary blood samples
- Windows software with at least 40,000 storage for patient results and 60 files for QC data
- Customization on reference range, auto-cleaning schedule and report format
- Support bi-directional LIS connection



### White blood cell differentiation

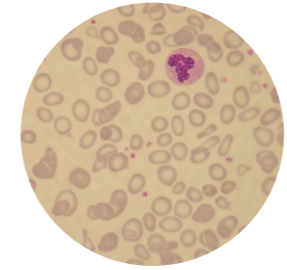
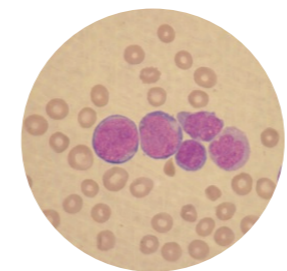
The semi-conductor laser system collects forward scatter and side scatter information of white blood cells in a flow cell and differentiates lymphocytes, monocytes, neutrophils and eosinophils according to the cell size and granule complexity. Specific chemical dye treatment to eosinophils can separate from neutrophils in DIFF scattergram. In addition, basophils are measured in an impedance channel upon lysing action on the RBC and other WBC groups.

### Advanced impedance measurement for RBC and PLT

Mindray patented digital sheath flow and weak signal detection techniques are applied to ensure accurate counting and sizing of RBC and PLT in the impedance channel. Dynamic discriminator adjustment can improve the separation of RBC and PLT groups when large platelet and micro RBC are present. Benefiting from these improvements, MCV, RDW and PLT performance are greatly enhanced.

### Flag abnormality

Besides of the routine CBC+DIFF results, BC-5300 offers data result for large immature cell and atypical lymphocytes in infectious diseases. Intelligent flagging system can help doctors fish out suspicious cases for further validation check. For example, microcytosis, anemia, eosinophilia, PLT clump and so on. The manual microscopic check results and morphology description can be print together in the final report.



### 20uL blood sampling

The precise sampling system enables microsampling of 20uL blood for CBC+DIFF test, making the analyzer an ideal choice to work with pediatric and geriatric samples. The benefits extend to reduced reagent consumption and possibility for a backup test.



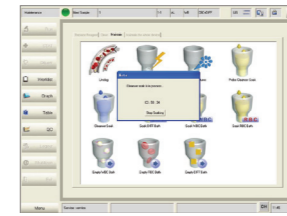
### M-53 reagents and BC-5D controls

Only 4 routine M-53 reagents are utilized in counting cycle featuring economical consumption and 2 years shelf life. To help precision monitoring, three levels of BC-5D controls are offered in a ready-to-use kit and the assay value table can be automatically imported through USB memory.

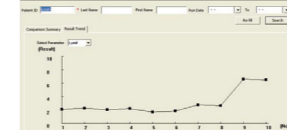


### Windows based software

The analyzer's windows-based software is simple to use and plays a powerful information hub to store 40,000 patient results. You can set-up password access, reference range, auto-cleaning schedule and so on. Also, the built-in report format tool can help to customize the final report type to include microscopic counting, ESR, blood type and diagnostic remarks. Most of the maintenance functions are presented in cartoon icons and can be executed in mouse click without manual work.



Parameter	Temp	Unit	Normal Range	Result
WBC	8.7	10 <sup>9</sup> /L	4.0-10.0	8.7
NEU	65	%	50-70	65
LYM	32	%	20-40	32
PLT	150	10 <sup>9</sup> /L	100-400	150
MCV	113	fL	80-100	113
RDW	14.1	%	11.5-14.5	14.1
HGB	166	g/L	120-160	166
HCT	47.4	%	37-47	47.4



### QC monitoring and patient archive

60 QC files are designed to store L-J QC results. 300 data points can be recorded in single file. 4 common QC programs are enabled for full quality assurance purposes. Patient data is archived and can be searched and presented in trend curve for case follow-up.



### Network connection

Supporting HL7 protocol, BC-5300 can be linked to LIS both in uni- and bi-directional manner. Test orders and patient information can be downloaded from server and the results can be automatically transmitted when tests finish.

