BC-7600 Series Auto Hematology Analyzer

BC-7600/BC-7800/BC-7900

Principles

*SF Cube technology to count WBC, 5-part diff, Ret, HMC, PLT-H and PLT-O
Focusing Flow-DC method for RBC and PLT-I
Cyanide free reagent for hemoglobin test
Photometric method for ESR test

*: Scatter; F: Fluorescence; Cube: 3D analysis

Parameters

54 Reportable parameters (whole blood)

WBC, Bas#, Bas%, Neu#, Neu%, Eos#, Eos%, Lym#, Lym%, Mon#, Mon%, IMG#, IMG%, Neu-X, Neu-Y, Mon-X, RBC, HGB, MCV, MCH, MCHC, RDW-CV, RDW-SD, HCT, NRBC#, NRBC%, Micro%, Macro%, *RET%, *RET#, *RHE, *IRF, *LFR, *MFR, *HFR, *MCVr, *DELTA-CH, *MCHr, *HDW, *MCHm, *HYPO-CH%, *HYPER-CH%, PLT, MPV, PDW, PCT, P-LCR, P-LCC, PLT-H, PLT-I, *IPF, *IPF #, *PLT-O,ESR

*: BC-7800 Only

Research parameters (whole blood)

- BC-7600 has 59 research parameters
- BC-7800 has 77 research parameters
- BC-7900 has 60 research parameters

7 Reportable parameters (body fluid)

30 Research parameters (body fluid)

- BC-7600/BC-7900 has 11 research parameters
- BC-7800 has 30 research parameters

3 Histograms

RBC, PLT, and PLT-H

6 Three-dimension scattergrams

DIFF, WNB, *RET, PLT-H, #HMC, *RBC VHF

All three-dimension scattergrams can be represented as Surface plot

*: BC-7800 Only; #: BC-7900 Only

10 Two-dimension scattergrams

DIFF, DIFF-EXT, WNB, *RET, *PLT-O, *RET-EXT, PLT-H, #HMC, *RBC, *RBC VHF

*: BC-7800 Only; #: BC-7900 Only

Working Condition

Temperature: 15 C ~32 C
Humidity: 30%~85%
Air pressure: 70.0 kPa~106.0 kPa

Power Supply

Power Voltage: 100V-240V~(±10%)
Input Power: 500VA
Frequency: 50Hz/60Hz(±1Hz)

Loading Capacity

Up to 50 sample tubes

Data Storage Capacity

BC-7600: Up to 130,000 results including numeric and graphical information
BC-7800\BC-7900: Up to 140,000 results including numeric and graphical information

Test Panels

- CBC, CD, ESR, CBC+ESR, CD+ESR
- Ret, CDR, CDR+ESR, CDR/PLT-8X, PLT-O, CD/PLT-O/ hs-BF (BC-7800 Only)
- CD+HMC (BC-7900 Only)

Sample Volume

Whole blood

85μL: CBC, CD, Ret, CDR, CRD/PLT-8X, CD/PLT-O
140μL: §ESR, §CBC+ESR, §CD+ESR, §CDR +ESR, CD+HMC

Micro whole blood

27±2μL: CBC, CD
36.5±2μL: Ret, §CDR, §CDR/PLT-8X, PLT-O, CD/PLT-O
50μL: CD+HMC
90μL: §ESR, §CD+ESR, §CDR+ESR

Predilute mode

20μL: CBC, CD, Ret, CDR

Body fluid

20μL: CD
225μL: hs-BF

Throughput

Whole blood

Up to 110 samples per hour (CBC, CD)
Up to 65 samples per hour (CD+HMC)
Up to 90 samples per hour (§ESR, §CBC+ESR, §CD+ESR)
Up to 65 samples per hour (Ret, CDR, §CDR+ESR)
Up to 35 samples per hour (CDR/PLT-8X, PLT-O, CD/PLT-O)

Micro whole blood

Up to 70 samples per hour (CBC, CD, §ESR, §CBC+ESR, §CD+ESR)
Up to 40 samples per hour (CD+HMC)
Up to 45 samples per hour (Ret, CDR, §CDR+ESR)
Up to 30 samples per hour (CDR/PLT-8X, PLT-O, CD/PLT-O)

Predilute mode

Up to 70 samples per hour (CBC, CD)
Up to 45 samples per hour (Ret, CDR)

Body fluid

Up to 44 samples per hour (CD)

§: Not applicable in France, Germany, and Italy

Dimensions and Weight

Width ≤675 mm, Height ≤850 mm, Depth ≤870 mm
Weight (autoloader included) ≤150 kg

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healthcare within reach

www.mindray.com

P/N:ENG-BC-7600 Series-210285X12P-20250110

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Branch Offices: Coimbatore & Madurai

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Marketed By:

FusionGreen Healthcare Pvt. Ltd.
We deliver ...

+91 9677144414, 9940141956

TOLL FREE NO: 1800-203-2528

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BC-7600 Series

Auto Hematology Analyzers

One Tube, One Process with Maximum Efficiency

BC-7600 Series
Auto Hematology Analyzers

All in 5

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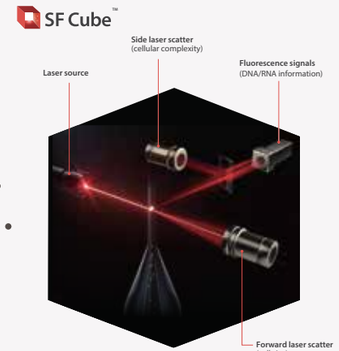
BC-7600 Series Auto Hematology Analyzers provide comprehensive solutions for complete blood count (CBC), differential white blood cell count (DIFF), hematological malignant cells, low-value WBC/PLT, PLT clumps, etc. They also support the analysis of body fluids.

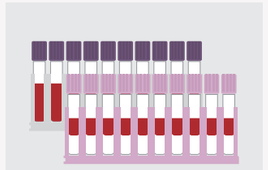
BC-7600 Series adopts SF-Cube principal, which has a good correlation with other Series for cross-checking of patient results.



- Whole Blood
- Micro Whole Blood
- Body Fluid

All Processes in One

Provides greater ease and efficiency with reliable results with single aspiration

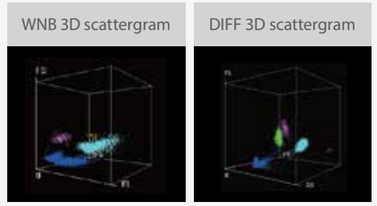


Reportable parameters

CBC | NRBC | IMG | RET | ESR | .....

Identification of abnormal & immature cells and anti-interferences at once

Achieves early diagnosis with routine blood tests



- Precise screening of abnormal WBCs
- The determination of IMG and NRBC in every CBC analysis
- Optical PLT-H in every CD tests

Auto-retesting of problematic samples through user-defined re-examination rules

Minimize human intervention with more clinical values

Automatic retraction and re-testing

easy·W™ ESR Solution

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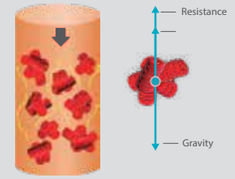
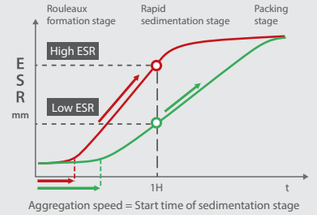
Mindray Technology Delivers Reliable ESR Results with Exceptional Efficiency

easy·W™ ≤40s



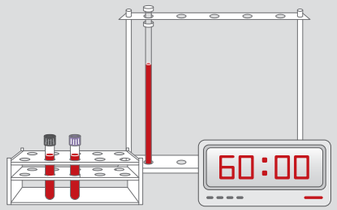
Schematic of rapid sedimentation of erythrocyte aggregates



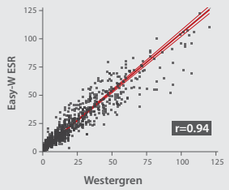
Aggregation speed = Start time of sedimentation stage

VS

Westergren method ≥3600s



High correlation coefficient between Easy-W ESR and Westergren method



CBC/CD/CDR + ESR in one test provide greater ease and efficiency with reliable results

The BC-7600 series integrates an automatic ESR module in a hematology analyzer. It can also generate both CBC/CD/CDR & ESR results in one test within 1min.In addition, it eliminates the need for additional resources related to the acquisition, maintenance, consumables, and storage space of a separate ESR analyzer.

Accurate

- Utilize the same QC and calibrator as in the BC-6800Plus 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, DIFF, RET and ESR detection
- Takes up the space of only one analyzer

Automatic

- Standardize the testing process and reduce the instability of testing
- Automation reduces bio-safety hazards from manual methods

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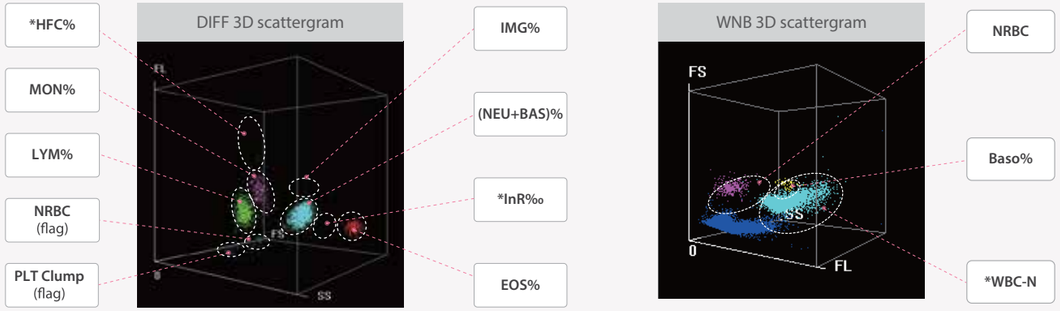
Precise Screening of Abnormal White Blood Cells

Precise screening with DIFF and WNB

In DIFF 3D scattergram, BC-7600 series not only gives WBC differential results (with immature granulocyte), but also brings research parameters such as HFC (Blast & Atypical Lymphocyte), flags for NRBC, PLT clump, and prompts infectious mononucleosis.

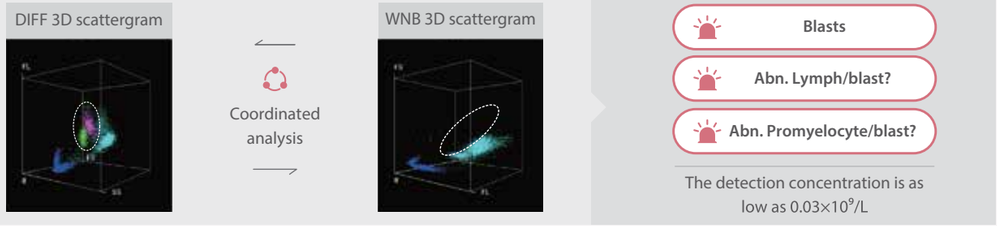
In WNB 3D scattergram, Basophil and NRBC results are generated from BC-7600 series without additional reagents. WNB & DIFF dual-channel prevents missing detection of blast cells.



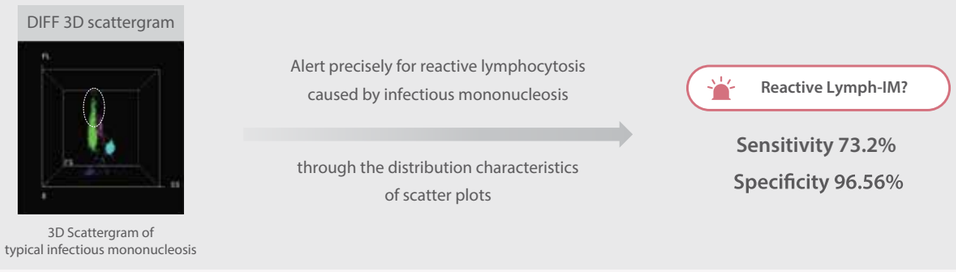
*For research use only

High sensitivity and specificity of blast flagging capability for preliminary screening

The coordinated analysis technology of WNB and DIFF scattergarms give sensitive alerts for “Blasts" with high specificity to reduce unnecessary labor-intensive manual microscopy.



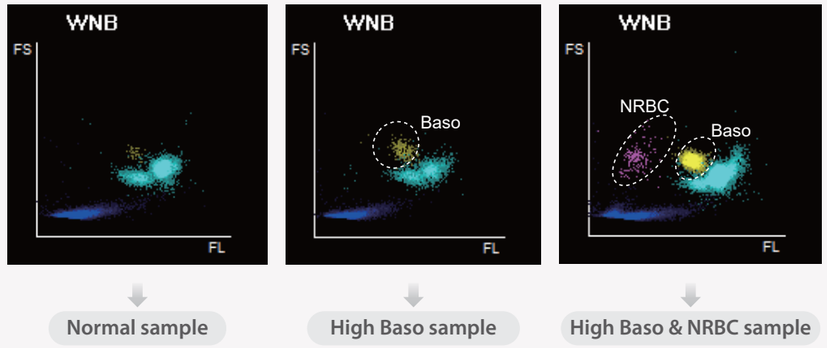
Flag towards precise screening of infectious mononucleosis (IM)



Reportable NRBC results in every CBC

NRBCs do not usually exist in peripheral blood except in newborn children. Detection of NRBCs is essential for diagnosing and monitoring hematopoietic diseases.

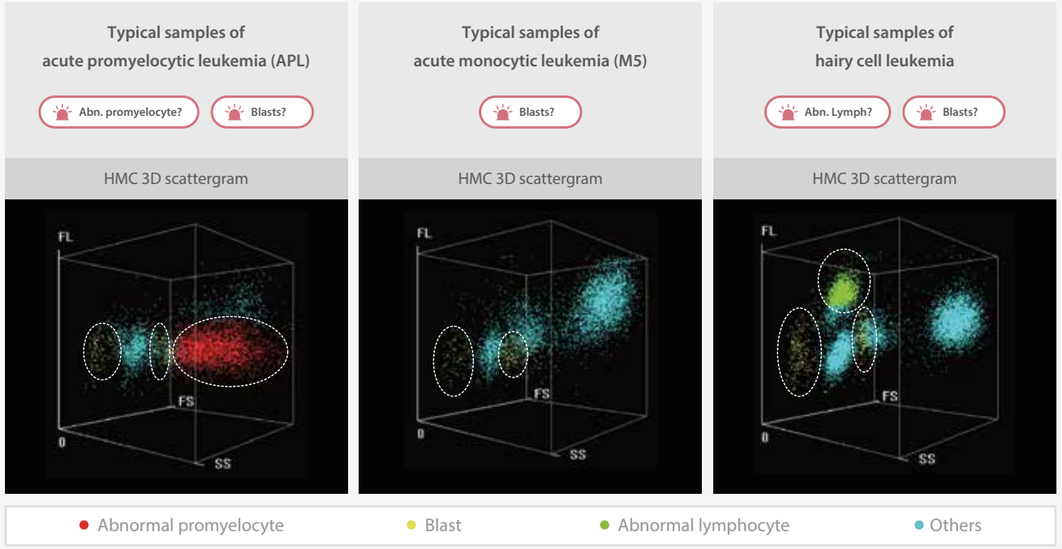
WNB scattergarm provides accurate results on samples even with high level of Basophils and NRBC



Higher specificity for hematological malignant cells

By using the HMC scattergram and combining information from the DIFF and WNB scattergrams, precise alarms for blast cells, abnormal lymphocytes, and abnormal promyelocytes are achieved, effectively aiding clinical diagnosis.

The specificity has been improved by approximately 40% compared to CD mode.



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Comprehensive solution for accurate PLT results

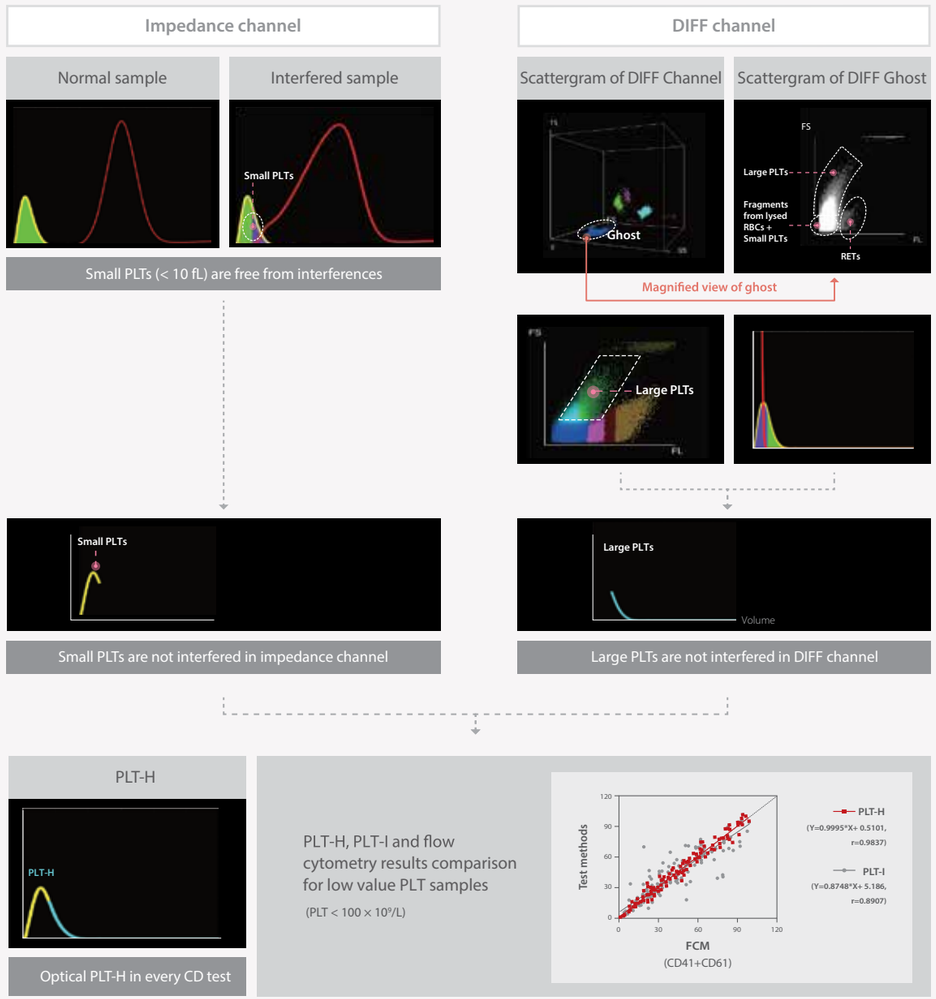
Optical PLT-H in every CD test

PLT-H dual-scattergarm fusion technology

In the traditional impedance method, PLTs are subject to interferences that may lead to falsely high or falsely low results. In order to solve the problem, we have developed the 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 (such as large platelets, erythrocyte fragments and etc.) in conventional PLT detection without requiring extra reagents.

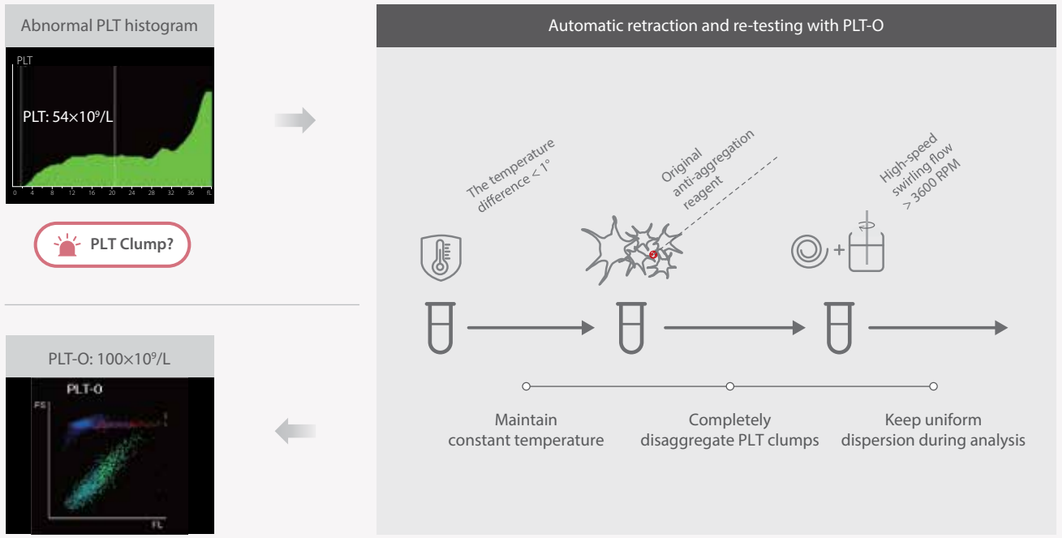
Schematic diagram of PLT-H



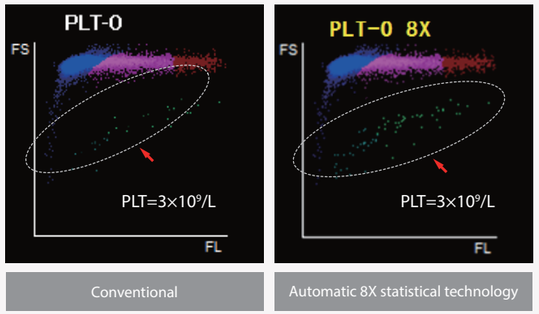
PLT-O provides more accurate PLT results

PLT-clumps de-aggregateion technology

It automatically solves the problem of falsely low PLT count samples induced by EDTA-PTCP.



Reliable result for low PLT count samples



There is no need to re-aspirate the samples.The instrument will automatically conduct 8-times statistical analysis on low PLT count samples to improve the detection accuracy.

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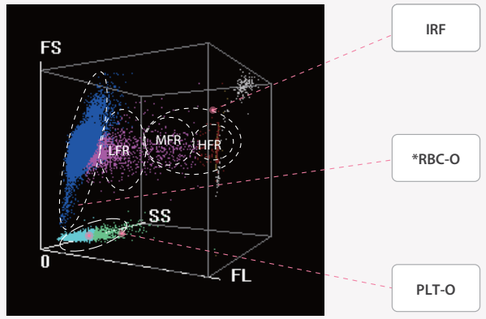
Accurate RBC results and more clinical value

RET parameters



Reticulocytes are differentiated from the other red cells by their reaction with fluorescent stain.

Besides the traditional parameters such as RET# and RET%, BC-7800 provides data concerning immature reticulocytes (IRF), which can assist in early diagnosis of anemia and monitoring the bone marrow response to therapy.

Solutions for samples interfered by lipid particles

The influence of lipid particles

Lipid blood sample

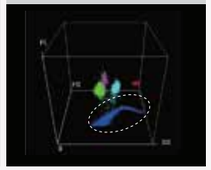
Lipid particles can cause interference with sample testing and affect the accuracy of results

- False elevation of HGB and PLT
- Inaccurate results of WBC differential results in rare cases

Reliable WBC results

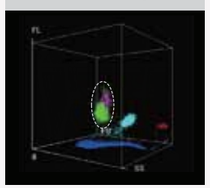
Leverage the low fluorescence intensity of "lipid particles" to effectively eliminate interference

DIFF 3D scattergram



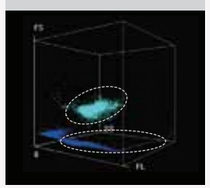
Fully automatic lipid blood sample identification and re-examination

DIFF 3D scattergram



Coordinated analysis

WNB 3D scattergram



Utilize the scatter characteristics of WNB and DIFF scattergram

Accurately identify samples interfered by lipid particles

Lipid Particles?

Sensitive and specific

Automatic re-testing with CDR

Precise results for reference

***HGB-O | PLT-O**

*For research use only

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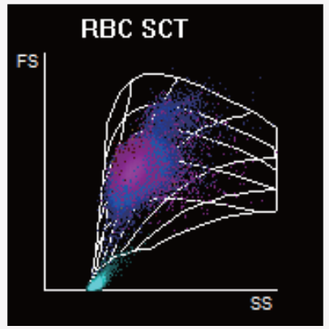
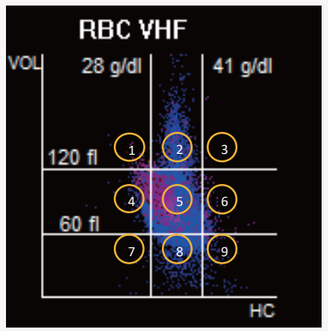
RBC VHF scattergram

On RBC VHF scattergram, RBCs (blue) & RETs (pink) could be subdivided into 9 regions by cell size and hemoglobin concentration and provide research parameters such as MCHr, HDW, *HYPO%, *HYPER% to assist the diagnosis of iron deficiency anemia.



*MPC | HDW | *MPM | *HYPO% | MCHr | *HYPER%

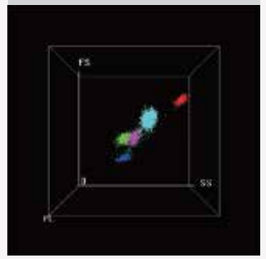
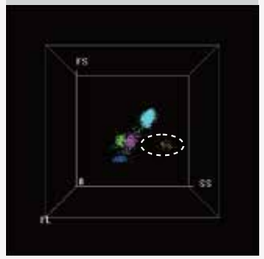
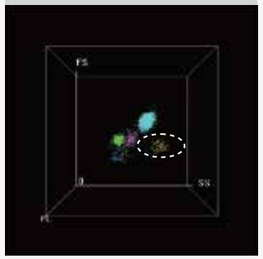
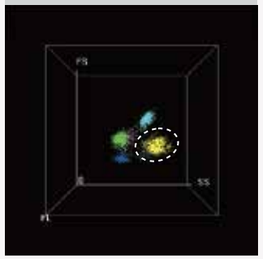


*MPC and *MPM reflect the density and concentration of contents inside PLTs, which signifies the excitation status of platelets in peripheral blood. They provide a new approach to assist the diagnosis of thrombotic diseases, cardiovascular diseases and inflammations.

Malaria screening

DIFF scattergarm provides a dedicated flag called “infected RBC?”, and “*InR(#,‰)”parameters to represent the number and ratio of the infected red blood cells in the sample respectively.

The DIFF scattergram provides information about the possible presence of plasmodium parasite, the causative agent of malaria infection.

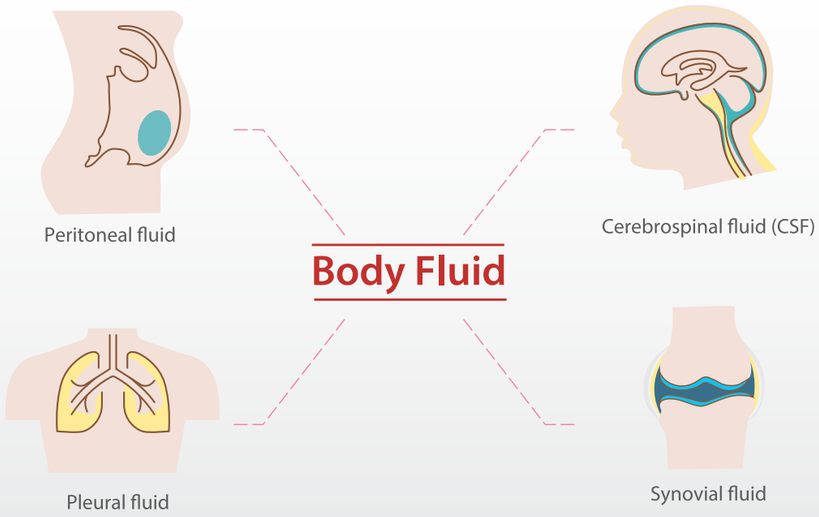
Normal sample	Few	Some	Many
			
	1-4 infected RBC per 4 microscopy view	2-3 infected RBC per microscopy view	>4 infected RBC per microscopy view

Note: The yellow scatters are used for emphasis only.

As the number of red blood cells with malaria parasites increases, the number of dots in the 'InR' area rises proportionately. This allows for not only screening but also assessing the severity of malaria infection.

Body Fluid

It is applied for various types of body fluids include Peritoneal fluid, Pleural fluid, Cerebrospinal fluid (CSF) and Synovial fluid.



Benefits in daily routine

- Automated measurement of different body fluids around the clock – without pre-treatment of the samples
- A reduced number of time-consuming manual chamber counts

Hs-BF mode

The mode is utilized for differentiating highly fluorescent cells and obtaining an additional count value for red blood cells.

Detect samples with an erythrocyte concentration lower than 1000/µL

RBC scattergram

Parameters	Results	Units
*RBC-hsBF	344	10^6/L

*For research use only

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Different configurations to meet various demands

CAL 7000E

CAL 7000

CAL 9000

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