BC-6800Plus
Auto Hematology Analyzer

Principles
SF Cube* method to count WBC, 5-part diff, NRBC, ERP and PLT-O
Focusing Flow-DC method for RBC and PLT
Cyanide free reagent for hemoglobin test
*S: Scatter; F: Fluorescence; Cube: 3D analysis

Parameters
37 Reportable parameters (whole blood): WBC, Lym%, Mon%, Neu%, Bas%, Eos%, IMG%, Lym#, Mon#, Neu#, Eos#, Bas#, IMG#; RBC, HGB, HCT, MCV, MCH, MCHC, RDW-CV, RDW-SD, NRBC#, NRBC%; PLT, MPV, PDW, PCT, P-LCR, P-LCC, RET%, RET#, RHE, IRF, LFR, MFR, HFR, IPF

48 Research parameters (whole blood): HFC#, HFC%, RBC-O, PLT-O, PLT-I, WBC-O, WBC-D, TNC-D, IME%, IME#, H-NR%, L-NR%, NLR, PLR, WBC-N, TNC-N, InR#, InR‰, Micro#, Micro%, Macro#, Macro%, RPI, H-IPF, IPF#, MRV, FRC#, FRC%, PDW-SD, Neu-X, Neu-Y, Neu-Z, Lym-X, Lym-Y, Lym-Z, Mon-X, Mon-Y, Mon-Z, SRBC, LRBC, SMCV, LMCV, MCHr, HDW, MPM, MPC, HYPER%, HYPO%

7 Reportable parameters (body fluid): WBC-BF, TC-BF#, MN#, MN%, PMN#, PMN%, RBC-BF

11 Research parameters (body fluid): Eos-BF#, Eos-BF%, Neu-BF#, Neu-BF%, HF-BF#, HF-BF%, RBC-BF, LY-BF#, LY-BF%, MO-BF#, MO-BF%

2 Histograms for RBC and PLT
4 Three-dimension scatter grams: DIFF, WNB, RET, ERP
7 Two-dimension scatter grams: DIFF, WNB, RET, RET-EXT, PLT-O, RBC SCT, RBC VHF

Mode
CBC, CBC+DIFF, CBC+DIFF+RET, CBC+RET, RET

Data storage capacity
Up to 100,000 results including numeric and graphical information

Operating environment
Temperature: 15℃~32℃
Humidity: 30%~85%

Performance

Parameter	Linearity Range	Precision	Carryover
WBC	0-500×10⁹/L	≤2.5% (≥4×10⁹/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	≤4.0% (≥100×10⁹/L)	≤1.0％
RET#	0-0.8×10¹²/L	≤15% (RBC≥3×10¹²/L; 1%≤RET%≤4%)	/

Sample volume
Whole blood (Autoloader)	190uL
Whole blood(Open vial)	130uL
Predilute（Open vial）	40uL
Body fluid (Open vial)	130uL

Throughput
Up to 200 samples per hour (CBC+DIFF)
Up to 120 samples per hour (CBC+DIFF+RET)
Up to 120 samples per hour (RET)
Up to 40 samples per hour (Body fluid)

Loading capacity
Up to 100 sample tubes

125kg
700mm
850mm
680mm

BC-6800Plus
Auto Hematology Analyzer

More than Fast

mindray
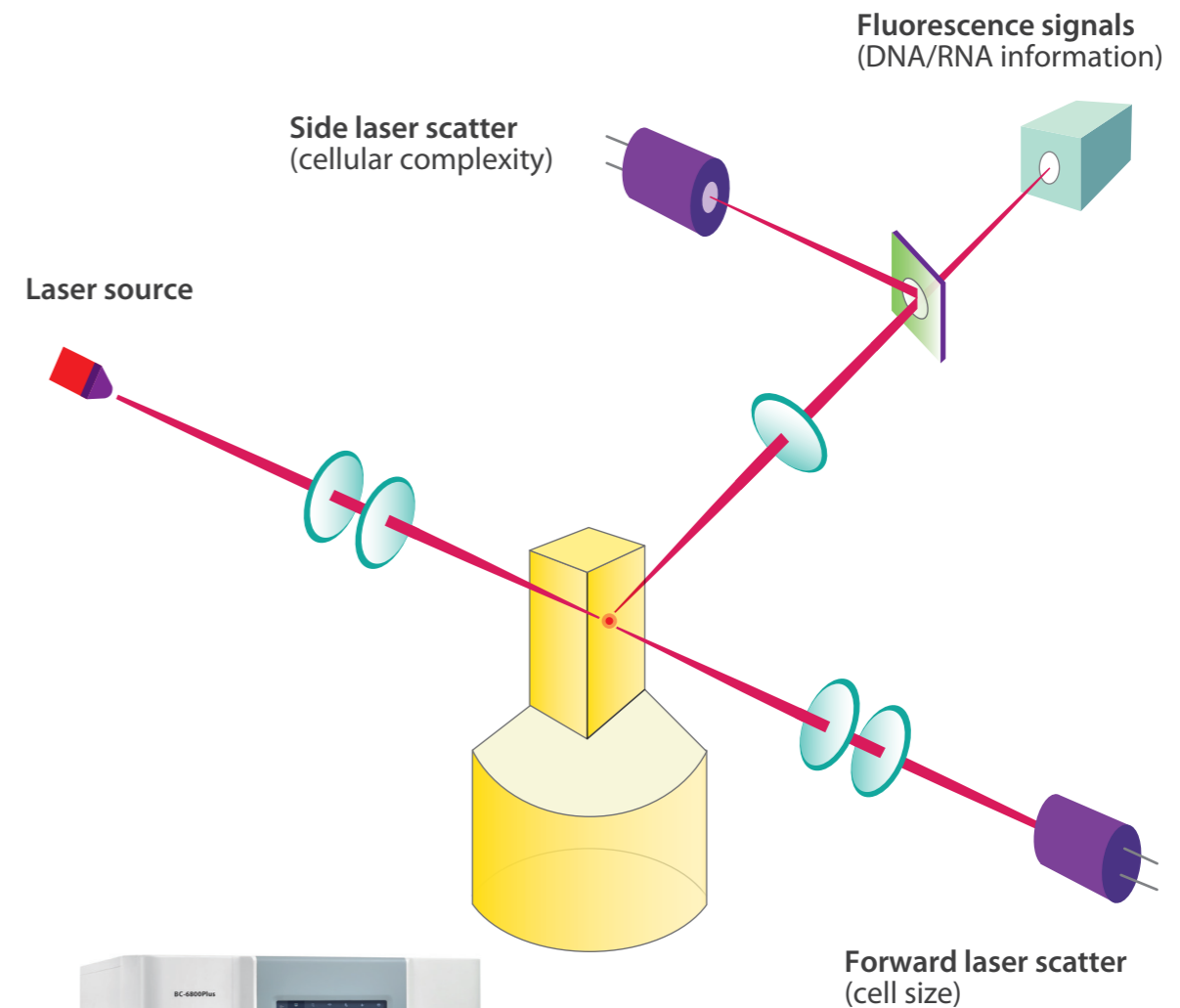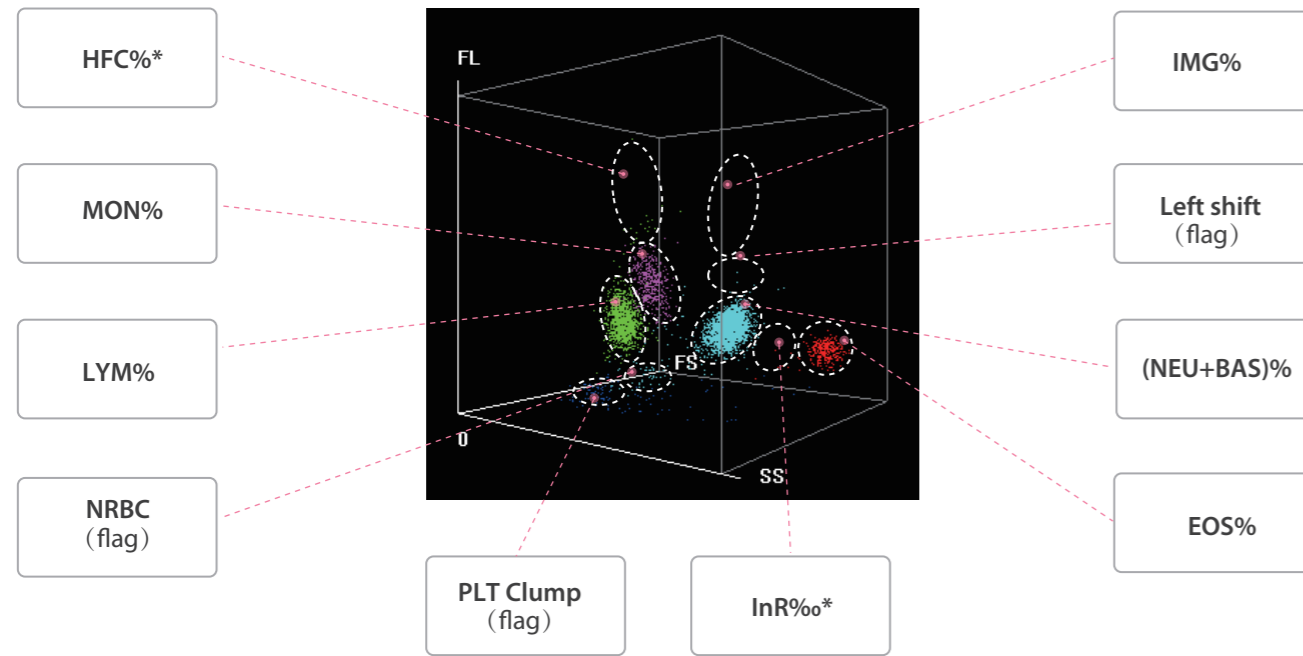healthcare within reach

At Mindray, we seek to understand the needs of every customer, and deliver tailor-made solutions. Before designing any product, we listen to the Voice Of Customers and bear in mind the challenges they face. In today's laboratories, lab managers are looking for an analyzer with greater clinical values, such as higher flagging efficiency to reduce the ratio of microscopic examination, NRBC/RET/body fluid results generated in a high-speed system, among others, all within limited budget.

Mindray BC-6800Plus fulfills all these requirements and exceeds your expectations with so much more in terms of **Value**, **Operation** and **Cost.**

SF Cube
Cell Analysis Technology

Fluorescence signals
(DNA/RNA information)

Side laser scatter
(cellular complexity)

Laser source

Forward laser scatter
(cell size)

With the newly designed optics and reagent systems, the SF Cube technology can help doctors to better differentiate the clusters of cells, which is the key to revealing more abnormal cells.
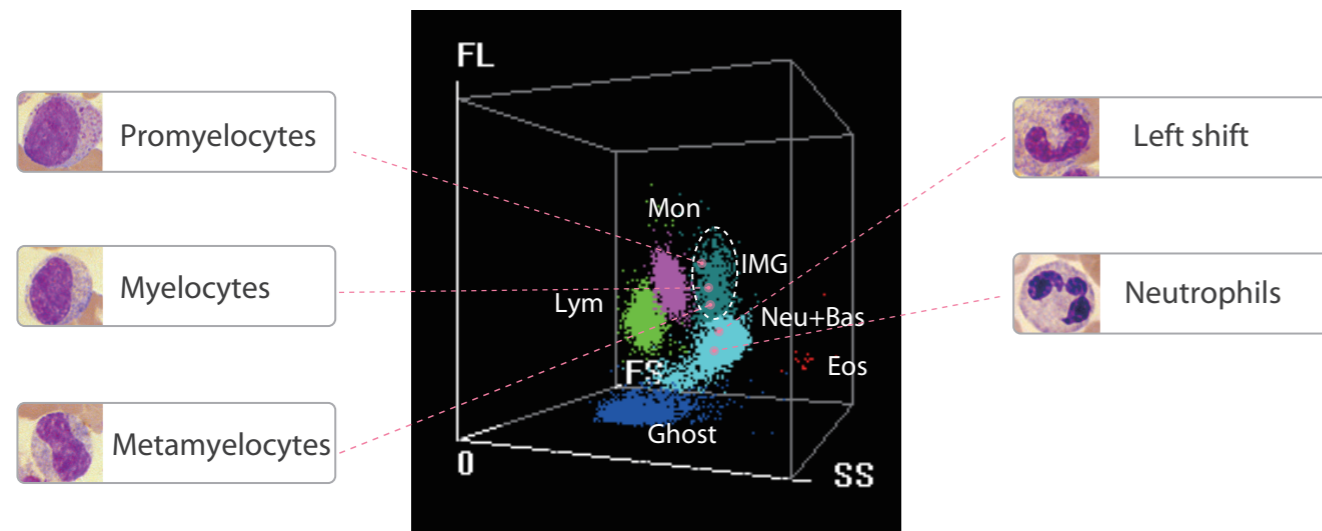
DIFF Channel

HFC%*

MON%

LYM%

NRBC（flag）

PLT Clump（flag）

InR‰*

IMG%

Left shift（flag）

(NEU+BAS)%

EOS%

In DIFF scattergram, BC-6800Plus not only gives WBC 5-part differential results (with immature granulocyte), but also brings research parameters such as HFC (Blast & Atypical Lymphocyte), InR (information about malaria) and flags for Band, NRBC, PLT clump and Atypical Lymphocyte.
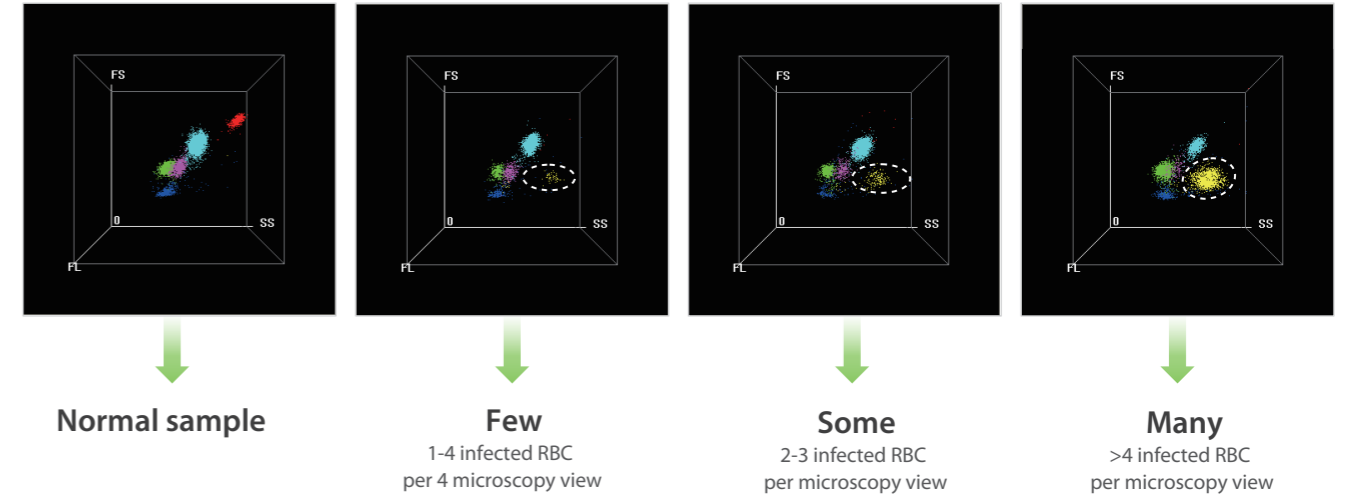
HFC*(#, %) parameters represent high population of fluorescent cell, such as Blasts and Atypical Lymphocytes.

IMG(#, %) parameters provide information about immature granulocytes, including Promyelocytes, Myelocytes, Metamyelocytes, Immature Eosinophils and Immature Basophils.

Promyelocytes

Myelocytes

Metamyelocytes

Left shift

Neutrophils

*For research use only

Malaria screening

Normal sample

Few
1-4 infected RBC
per 4 microscopy view

Some
2-3 infected RBC
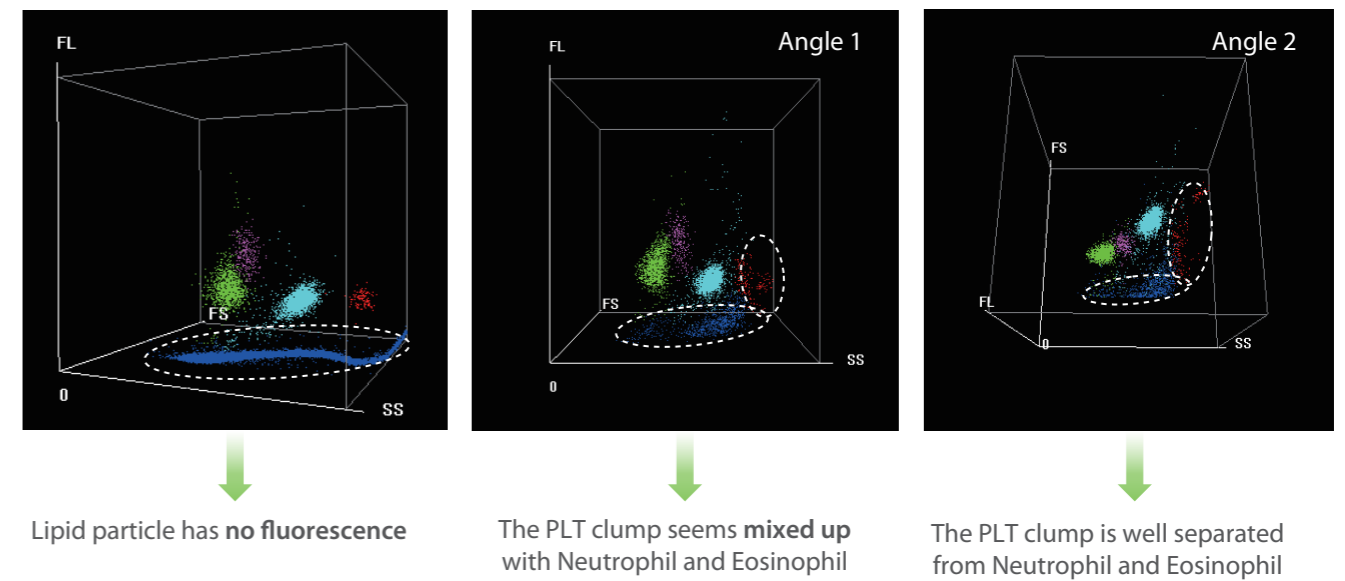per microscopy view

Many
>4 infected RBC
per microscopy view

Note: The yellow scatters are just for highlight.

BC-6800Plus 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. BC-6800Plus users can obtain information about the possible presence of plasmodium parasite, the causative agent of malaria infection.
With the rising number of red blood cells with malaria parasites, the number of dots in the "InR" area increases proportionately. This creates the possibility to not only screen but also judge the severity of malaria infection.

Interference prevention

Lipid particle has **no fluorescence**

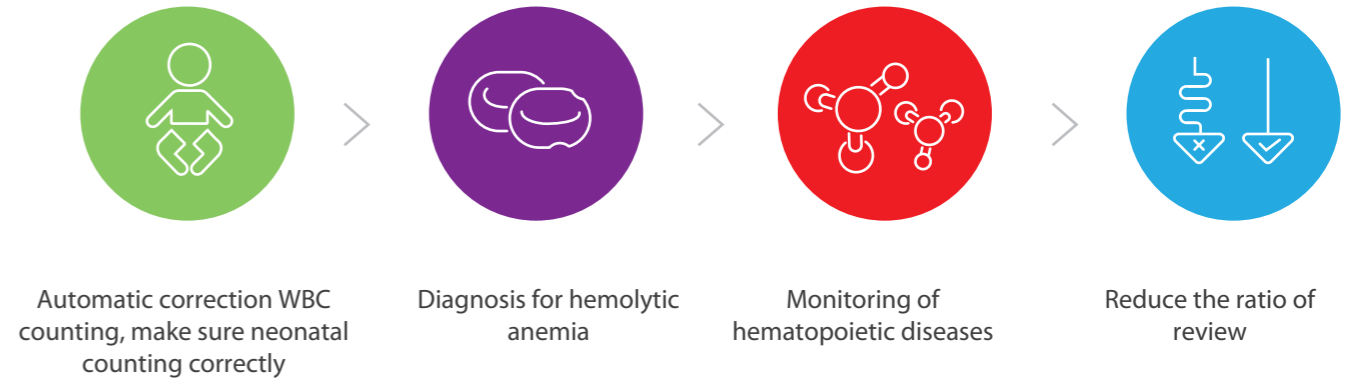The PLT clump seems **mixed up** with Neutrophil and Eosinophil

The PLT clump is well separated from Neutrophil and Eosinophil

In DIFF scattergram, WBCs are dyed, but not lipid particles, by fluorescence, which prevents interference and ensures more accurate WBC results.
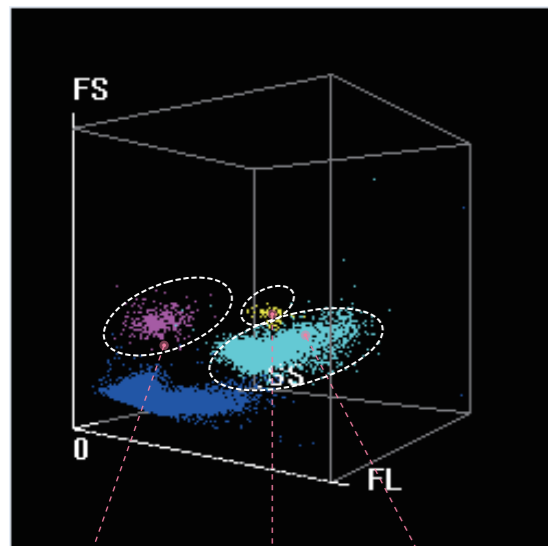With information obtained through the 3D analysis, PLT clumps are well separated from each cluster of WBCs.

NRBC results in every CBC

Automatic correction WBC counting, make sure neonatal counting correctly

Diagnosis for hemolytic anemia

Monitoring of hematopoietic diseases

Reduce the ratio of review

WNB Channel

In WNB scattergram, BC-6800Plus provides NRBC, Basophils and WBC-N* results. It means that the actual number of NRBCs can be measured in routine CBC, if they are present in the sample. Basophils are counted in this counting channel with NRBC results.

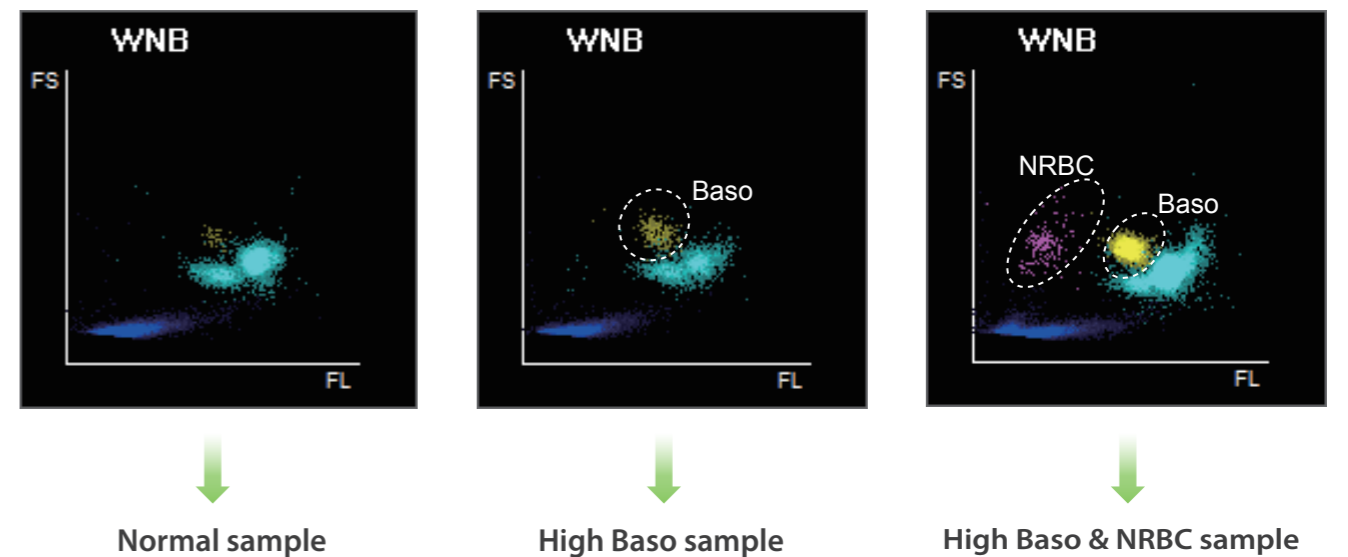Basophil and NRBC results are generated on BC-6800Plus without extra reagent or cost.

NRBC   Baso%   WBC-N *

*For research use only

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

Normal sample

High Baso sample

High Baso & NRBC sample

BC-6800Plus provides accurate results on samples even with high level of Basophils and NRBCs.
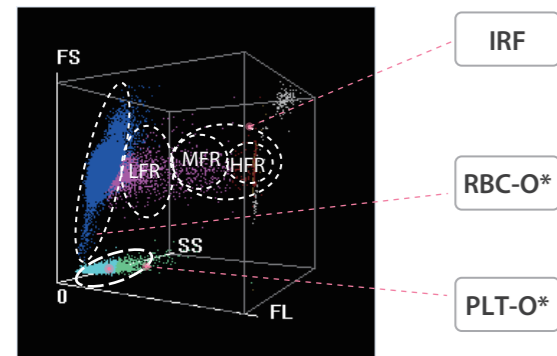
ERP Channel

ERP channel is able to generate 2 three-dimension scattergrams to count Erythrocytes(RBC), Reticulocytes(RET) and Plateletes(PLT) as well as 5 two-dimension scattergrams including RBC SCT, RBC VHF, RET, RET EXT, PLT-O.
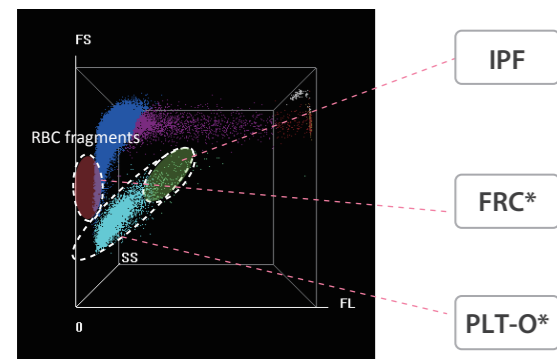
MPC*	HDW*
MPM*	HYPO%*
MCHr*	HYPER%*

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* 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.

RET parameters

| IRF |
| RBC-O* |
| PLT-O* |

With the SF Cube cell analysis technology, Reticulocytes are differentiated from the other red cells by their reaction with fluorescent stain. Besides the traditional parameters such as RET# and RET%, BC-6800Plus provides data concerning immature reticulocytes (IRF), which can assist in early diagnosis of anemia and monitoring the bone marrow response to therapy.
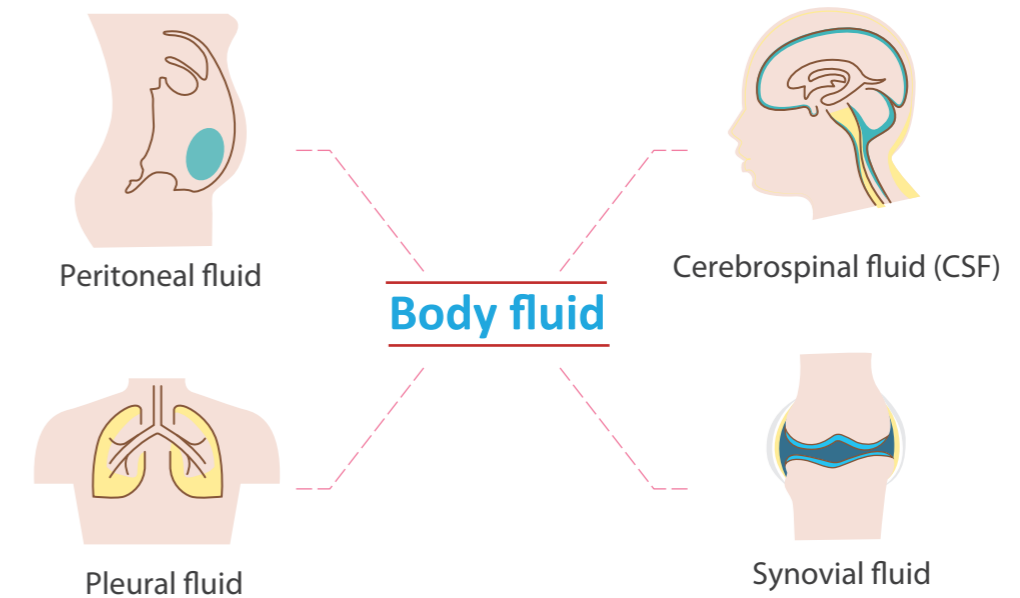
PLT-O & RBC fragments

| IPF |
| FRC* |
| PLT-O* |

In ERP channel, PLT-O* can prevent the interferences of Fragmented Red Cells(FRC*) and offer more accurate PLT count compared to traditional technology. IPF measures the Immature Platelet Fraction, which can be used to reflect thrombopoiesis capabilities of patients.
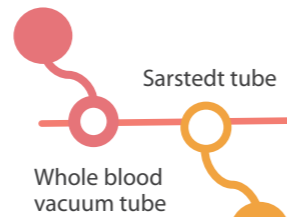
For research use only

Body fluid

Besides blood specimen, BC-6800Plus also has body fluid test function without requiring dedicated reagent. The various types of body fluids include Peritoneal fluid, Pleural fluid, Cerebrospinal fluid (CSF) and Synovial fluid.

Peritoneal fluid

Cerebrospinal fluid (CSF)

Body fluid

Pleural fluid

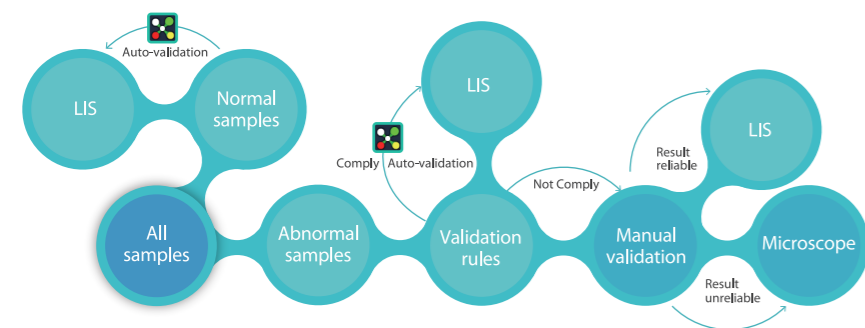Synovial fluid

Applicable to variety of tubes

To cater to customer's diversified needs, different types of blood collection tubes can be used on BC-6800Plus , including regular whole blood vacuum tube, capillary blood microtainer tube and Sarstedt tube.

More Intuitive labXpert software

LabXpert is a standard configuration of BC-6800Plus for professional data analysis.

The labXpert software optimizes functions to simplify your workflow for data analysis including improving re-exam efficiency, auto-validation for normal samples; it also provides more intuitive interface for you to review and validate pathological samples.

Operation

Sarstedt tube

Whole blood vacuum tube

Cost

labXpert

Less testing time

BC-6800Plus can load up to 100 samples at a time and offers a throughput of up to 200 tests per hour.

Touch screen

BC-6800Plus can work standalone and has touch screen for basic operation by more intuitive software.

Easy maintenance

The only maintenance for end user is daily shut down by probe cleanser or probe cleanser cleaning once per day (if not shut down). The "auto-protect" program reminds operators when maintenance is needed (if not shut down).

Automatic Rerun & Reflex

Should the sample results trigger the criteria, the autoloader of BC-6800Plus can return the sample racks for an automatic rerun or reflex check.