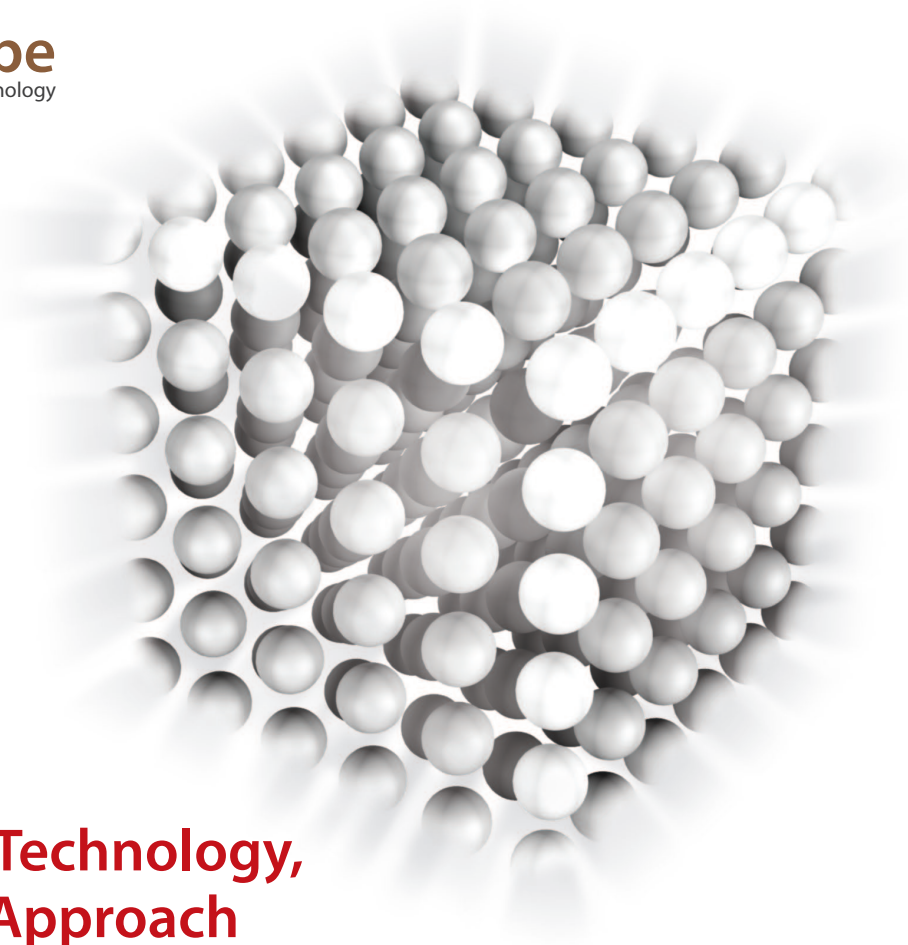# SF Cube
Cell Analysis Technology
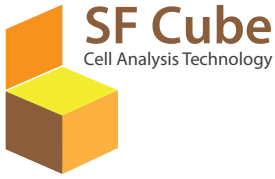
Exclusive Technology,
Inclusive Approach

BC-6800 NEW

Auto Hematology Analyzer

mindray
healthcare within reach

SF Cube

SF Cube is a pathbreaking technology for reliable blood cell analysis, including WBC differential, Reticulocytes and NRBC with efficient flagging. After reaction with proprietory reagents, the targeted blood cells undergo 3D analysis using information from scatter of laser light at two angles and fluorescence signals. The 3D scattergram builds the power to better identify and differentiate blood cell populations, especially to reveal abnormal cell population undetected by other techniques.

DIFF

BASO

NRBC
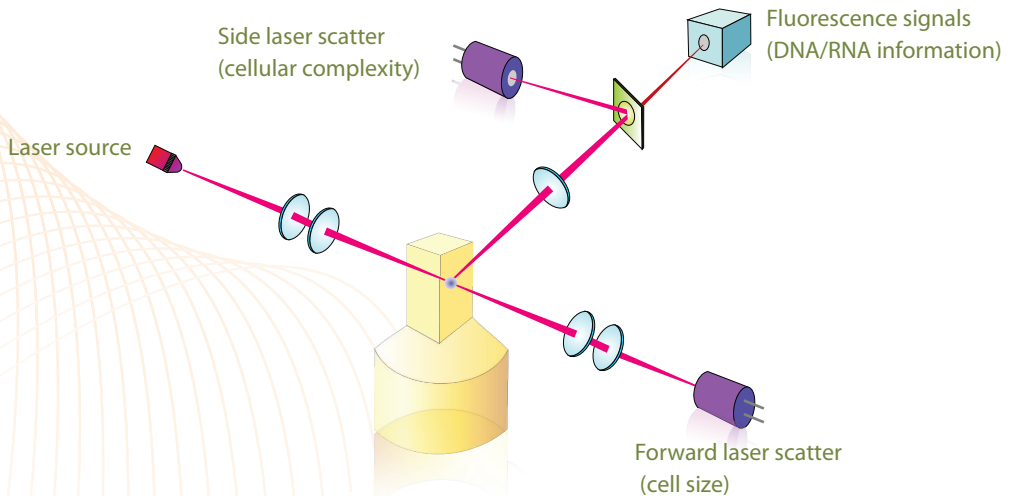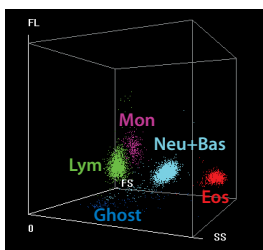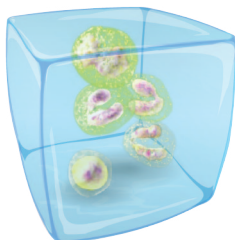
- Diff analysis in BC-6800 is a flow cytometric method that uses the SF Cube cell analysis technology to achieve a higher level of accuracy in WBC differential and flagging. After treated by reagents, the differential WBC populations are located in the DIFF scattergram according to their size, cellular complexity, and DNA/RNA information.
- IMG*(#, %) parameters provide information about immature granulocytes, including promyelocytes, myelocytes and metamyelocytes.
- HFC*(#, %) parameters represent high fluorescent cell population, such as blasts and atypical lymphocytes.
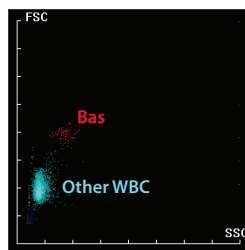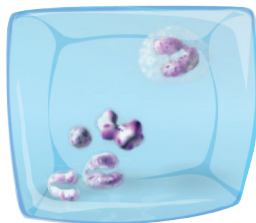
- Basophils are rendered bigger and more complex than other WBC sub-populations after mixing with reagents.
- The total WBC count is primary based on Baso channel with additional comparison of WBC information from 3 other delicated optical channels in order to eliminate the interference from NRBC, Lyse-resist RBC, etc.
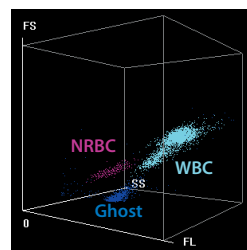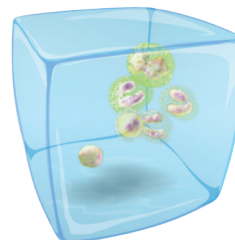
- NRBCs are counted in a dedicated channel by SF Cube method, which ensures timely and accurate results and provides the clinicians with information permitting better treatment decisions.
- BC-6800 automatically corrects total WBC count and 5-Part Diff results when NRBCs are detected. This ensures more reliable WBC & 5-Part Diff results and decreases manual review rate and also possibility of errors.

means research parameter

SF Cube
Cell Analysis Technology

Focusing Flow-DC method

The Focusing Flow-DC method uses sheath fluid to ensure optimum environment for reliable cell counting. The primary sheath flow ensures that cells pass through the counting aperture in single file and the secondary sheath flow prevents recirculation of the counted cells. These hydrodynamically focused cells are measured by DC method using their resistance to passage of electricity between electrodes positioned across the counting aperture.

Secondary sheath flow   Primary sheath flow
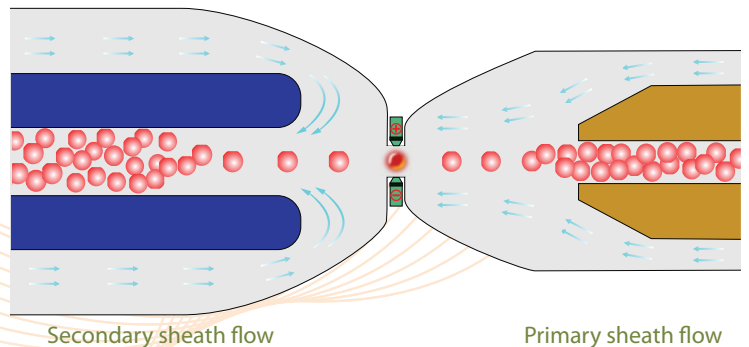
Focusing Flow-DC method

RBC & PLT
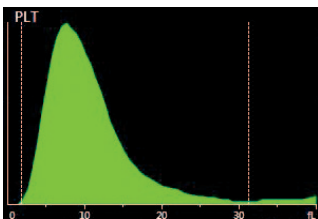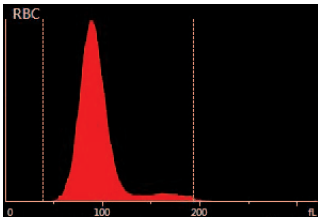
RET

PLT-O

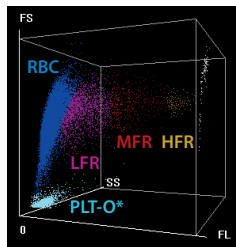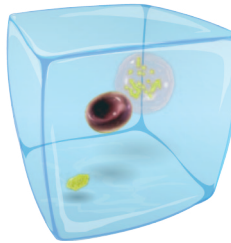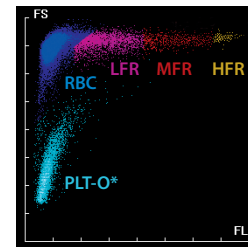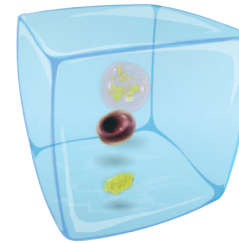- The Focusing Flow-DC method minimizes the interference traditionally encountered in DC technology to produce near gaussian histograms. Because of this, the histogram related parameters like MCV, RDW-CV, RDW-SD are more accurate and provide more reliable clinical information.

- Reticulocyte parameters provide information on status of erythropoiesis and extend valuable help in the differential diagnosis and/or therapeutic monitoring of anemias.
- In 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-6800 provides data concerning immature reticulocytes (MFR, HFR), which can assist in early diagnosis of anemia and monitoring the bone marrow response to therapy.

- In the SF Cube cell analysis technology, platelets can be distinguished from the other interfering cell populations. PLT-O* result avoids the interference from microcytic and fragmented RBCs, large platelets and/or platelet clumps by fluorescent stain, and enhances the results accuracy and sensitivity.
- PLT result is automatically corrected when PLT-O* counting mode is employed.

means research parameter

SF Cube
Cell Analysis Technology
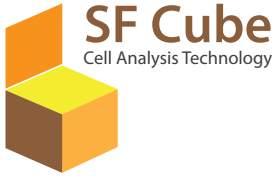
Let BC-6800 transform

Today, laboratories not only need more reliable routine CBC plus 5-part diff WBC testing by way of high processing speed, but are also looking for options that extend the analyzer's output in form of Reticulocytes, Nucleated RBCs, Fluorescent Platelet counts etc. for wider clinical application and research. On the other hand, they are restricted by limited budgets. BC-6800 can help to meet all these needs just perfectly and even exceed the expectations.

BC-6800

mindray

your lab!

Both PC and touch screen operation

125 tests/hour
100 tubes capacity

Built-in and external barcode scanner

Supports wider sizes and types of sample tubes

Easy to load information

Convenient replacement of reagents

CBC-Monitor™

On-line external quality control

Run STAT sample at any time

BC-6800
Auto Hematology Analyzer

Technical Specifications:

Principles

SF Cube cell analysis technology for WBC, 5-Part diff, NRBC, RET and PLT-O

Focusing Flow-DC method for RBC and PLT

Cyanide free hemoglobin measurement

Parameters

33 reportable parameters: WBC, Lym%, Mon%, Neu%, Bas%, Eos%, Lym#, Mon#, Neu#, Eos#, Bas#; RBC, HGB, HCT, MCV, MCH, MCHC, RDW-CV, RDW-SD, RET%, RET#, IRF, LFR, MFR, HFR, NRBC#, NRBC%; PLT, MPV, PDW, PCT, P-LCR, P-LCC

14 research parameters: HFC#, HFC%, IMG#, IMG%, WBC-R, WBC-D, WBC-B, WBC-N, RBC-O, PLT-O, PLT-I, PDW-SD, InR#, InR‰

2 histograms for RBC and PLT

3 scattergrams (3D) for DIFF, NRBC and RET

6 scattergrams (2D) for DIFF, BASO, NRBC, RET, RET-EXT, PLT-O

Performance

Parameter	Linearity Range	Precision	Carryover
WBC	$0\text{-}500\times10^9$/L	≤2.5% (≥4×10^9/L)	≤1.0％
RBC	$0\text{-}8\times10^{12}$/L	≤1.5% (≥3.5×10^{12}/L)	≤1.0％
HGB	0-250g/L	≤1.0% (110-180g/L)	≤1.0％
HCT	0-75%	≤1.5% (30%-50%)	≤1.0％
PLT	$0\text{-}5000\times10^9$/L	≤4.0% (≥100×10^9/L)	≤1.0％
RET#	$0\text{-}0.8\times10^{12}$/L	≤15% (RBC≥3×10^{12}/L; 1%≤RET%≤4%)	/

Sample Volume

Predilute mode (capillary blood), Open vial	40µL
Manual mode (whole blood), Open vial	150µL
Autoloader mode (whole blood), Closed vial	200µL

Throughput

Up to 125 samples per hour (CBC+DIFF)

Up to 90 samples per hour (CBC+DIFF+RET)

Loading capacity

Up to 100 sample tubes

Mode

CBC, CBC+DIFF, CBC+RET, CBC+NRBC, CBC+DIFF+RET, CBC+DIFF+NRBC, CBC+DIFF+RET+NRBC, RET

Data storage capacity

Up to 100,000 patient results including all numeric and graphical information

Printout

Various printout formats and user-defined formats available

Operating environment

Temperature: 15ºC~32ºC

Humidity:　30%~85%

Weight (kg)　≤125

380mm

700mm

850mm

mindray